E. LEWIS STURTEVANT.

B

J. Kruch.

Heidelberg 1805.

MARCELLI MALPIGHII
Medicinæ Professoris Bononiensis
OPERA OMNIA
Botanico-Medico-Anatomica

Lugd. Bat.
Apud
PETRUM VANDER. A.A.
Cum Privilegiis
16 87.

Per Adr. Schoonebeek Del. et Sculp. Amst.

MARCELLI MALPIGHII.

Medici, & Philosophi, nec non Professoris Bononiensis, Regiæ Societatis Anglicanæ Socii.

OPERA OMNIA,

SEU

THESAURUS LOCUPLETISSIMUS BOTANICO-MEDICO-ANATOMICUS,

VIGINTI QUATUOR TRACTATUS COMPLECTENS

ET IN

DUOS TOMOS DISTRIBUTUS,

quorum Tractatuum Seriem videre est Dedicatione absolutâ.

Editio Novissima, cum omnibus Codicibus hactenus publici juris factis collata, nunc primum elegantissimâ methodo disposita, variis Iconibus, ut & Authorum diversorum opusculis (materiam hanc spectantibus) illustrata, quibus omnes Editiones hactenus caruerunt, notis marginalibus, amplissimis passim addenda, crassis emendata sphalmatis, & uberrimis Illustrata Indicibus, tam Capitum, quam Rerum & Verborum.

Mo. Bot. Garden.
1893

LUGDUNI BATAVORUM,
Apud PETRUM VANDER Aa, Bibliopolam. MDCLXXXVII.

Cum Privileg.
D. D. Ordinum Hollandiæ & Westfrisiæ.

MARCELLI MALPIGHII

OPERA OMNIA,

THESAURUS LOCUPLETISSIMUS

BOTANICO-MEDICO-ANATOMICUS,

TRIBUS OLIM TOMIS DISTRIBUTUS,

CLARISSIMO. CELEBERRIMO.
MULTIJUGÆ. ERUDITIONIS.
ET.
EXPERIENTIÆ. VIRO.

D. D. CAROLO. DRELINCURTIO.

MEDICO. REGIO. IN. GALLIIS.
OLIM. APUD.
SERENISSIMUM. GL. MEM. PRINCIPEM.

DE TURENNA.

NUNC. VERO. APUD.

SERENISSIMAS.

ET.

REGIAS. CELSITUDINES.

ARAUSIONENSIUM. PRINCIPES.

Ἀρχιάτρῳ. UT. ET. IN. ATHENÆO. LUGDUNO-BATAVO. MEDICINÆ. PRACTICÆ. ET. ANATOMES. PROFESSORI. SENIORI.

CLARISSIME VIR,

Postquam aliquoties, Animo meo revolvi, MARCELLI MALPIGHII Medici, & Professoris Bononiensis monumenta, tam Botanico-Medica, quam Anatomica (Insigni laude, prædicatione, Literis condecoranda, omnique posteritate digna.) Londinen-

sibus typis jam pridem evulgata, illa plurimis Erroribus crassis & mendisque referta reperi, spurium hunc Autoris fœtum audacter clamitantibus. Ut ergo melius Erudito & Literato Orbi, acutissimis Lectoribus consulerem, studui totis, quibus potui, viribus, illam editionem emendare accuratioremque reddere, ut ne quid MALPIGHIO nostro detrahere videamur, nec incomparabilem nullique secundum hunc Autorem suâ debitâ laude fraudemus, qui tam indefessis lucubrationibus nobis amplissimùm aperuit Philosophandi campum, & ad Oculum (inspectione Anatomicâ accuratiori adhibitâ) demonstravit. Vegetantium Naturam, Genera, Species, & seminum Interiora, & si quæ adhuc essent nostri instituti Limites excedentia quæque, longa referre mora essent. Propter maximam operis hujus Analogiam cum Viviparorum Anatomica Encheiresi, in qua Tu VIRORUM DOCTISSIME ita excellis, ut nullum tibi perfacilè parem agnoveris; Idcirco Nulli melius quam tibi CLARISSIMO & omni Literarum Genere INSTRUCTISSIMO VIRO hæc oblata non sordentia inscribenda ratus sum fretus tuâ Humanitate & Benevolentia ausus fui amicitiæ tuæ fores pulsare obnixe petendo, ne huic fœtui asylum, & locum placidum concedere dedigneris, ut hoc pacto à Malevolorum cavillationibus & obtrectatorum nasutis argutiis Invidorumque morsibus in Gremio tuo

repositum tuearis & defendas non infra dignitatem cessurum reputavi, quod tibi obtulerim Magni, & Incomparabilis hujus Philosophi scripta qui post combustos suos cineres, magna adhuc sui parte superstes erit, cujusque non intermoriturum nomen & Decus perennabunt hoc in orbe Literato ad Seros usque Nepotes, & Luna hæc stellas velut inter minores emicabit. Speramus itaque, data occasione, ad nos ex tuis scriptis, & observatis eedro dignis in Ceimeliotheca tua adhuc recenditis, & repositis, nondumque luce publicâ donatis, fructum quempiam redundare posse. Utque hoc modo Literati Viri quidpiam possideant, quod Gustui, & Palato suo arrideat, & acceptum sit & tunc jure merito prolata hactenus Encomia nostri Autoris tibi tribuenda censeo. Tu qui omnibus lubentissimo animo prodesse possis & velis, Vivas diu feliciter Academiæ Tuæ, Reipublicæ Medicæ, Anatomicæ, & Literariæ Emolumento, et tuorum Anatomiæ φιλιάτρων Commodo, pergas amore prosequi.

Tibi Devotum

&

Clarissimi Nominis Tui Sempiternum Cultorem

PETRUM VANDER Aa.

SERIES TRACTATUUM HUJUS

OPERIS.

TOMI PRIMI.

I. ANATOMES PLANTARUM Idea.
II. PLANTARUM ANATOMES pars prima.
III. PLANTARUM ANATOMES pars secunda.
IV. De ANATOMI PLANTARUM [illegible] & OVI INCUBATO, [illegible]

TOMI SECUNDI.

V. Dissertatio Epistolica de BOMBYCI
VI. De [illegible] FORMATIONE PULLI IN OVO.
VII. De [illegible] OVO [illegible] occasione, ultro citroque scriptæ
VIII. [illegible]
IX. ANATOMES [illegible] CUNICULORUM COCHLEARUM, [illegible] MARCELLUM MALPIGHIUM
X. JOH. JACOBI [illegible] COCHLEAS, [illegible] INSECTO, [illegible] OVO, [illegible]
XI. De [illegible] CEREBRO ad CAROLUM FRACASSATUM
XII. [illegible] CEREBRO, ad MARC. MALPIGHIUM.
XIII. Exercitatio Anatomica de LINGUA
IV. CAROLUS FRACASSATUS de LINGUA
V. Exercitat. Anatomic. de EXTERNO TACTUS ORGANO
XVI. Dissertatio Epistolica de CORNUUM VEGETATIONE, UTERO, VIVIPARORUM OVIS, PLANTIS &c.
XVII. De OMENTO, PINGUEDINE, & ADIPOSIS DUCTIBUS
XVIII. De HEPATE.
XIX. [illegible]
De RENIBUS.
De LIENE.
XXII. Exercitatio Epistolica de POLYPO CORDIS
XXIII. Dissertationes Epistolicæ de PULMONIBUS
XXIV. [illegible] BARTHOLINI Dissertatio de PULMONUM [illegible] & Motu

TYPOGRAPHUS
LECTORIBUS
Salutem.

[illegible], Nobilis [illegible], [illegible], qua [illegible] ad [illegible] OPERUM OMNIUM [illegible] MAI[illegible]GIS [illegible] inter pervax erant, pretiumque [illegible] operæ, & ad sequentia animum parumper ad-[illegible]

Au[illegible], qui Sociorum Collegii Regii Londinen[illegible] unus est, Philosophus ac Medicus Bononiensis, inque Messanensi Cathedrâ Medicinæ Professor Primarius, adversis reipublicæ [illegible] [illegible], [illegible] [illegible] communi[illegible], q[illegible] [illegible], & Vi[illegible], [illegible] tedium vel[illegible] [illegible], [illegible] [illegible] [illegible]

(8) Columnæ [illegible] operis nostri [illegible]

(9) [illegible] Nos [illegible] Auctore [illegible]

(10) *Figuras variæ*, quæ in editione Londinensi Tract. de cerebro, *Linguæ & Pulmonibus defs inst*, in nostra [illegible]

(11) *Epitaphium* varii argumenti [illegible] *Bibliopola Londinensis divisa*

(12) *Nostra hac editio collata est cum omnibus* [illegible] *in fumma in typis recusorum* [illegible]

(13) *Curis tractatus specciale præmissimus argumentum*, [illegible] *quandam*, [illegible]

(14) *Extremus ultimæ paginæ versus* [illegible] *in illa verba emendavi.*

(15) *Indices adjecimus duos*, Tractatuum [illegible] *superiore paginarum parte* [illegible] *Plura quidem nos hoc afferre potuimus*, [illegible] *recommendare satis superque valebit*, [illegible] *reliqua hoc loco* [illegible] *vanum præstabit* [illegible]

MARCELLI MALPIGHII

PHILOSOPHI ET MEDICI BONONIENSIS

E

REGIA SOCIETATE ANATOMES PLANTARUM

PARS PRIMA.

REGIÆ SOCIETATI,

LONDINI

Ad Scientiam Naturalem promovendam institutæ, Dicata.

MAGNÆ
SOCIETATI REGIÆ
ANGLICANÆ

MARCELLUS MALPIGHIUS S.P.

Naturæ rerum vis, atque majestas, ex *Plinii* monito, *in omnibus momentis fide caret, si quis modo partes ejus, ac non totam complectatur animo.* Quapropter & Plantarum φύσις universa ultro-neis aggressionibus nobis fuit percurrenda. Hæ qualescunque sunt, Vobis jure optimo debentur; summi Viri: qui me obviâ humanitate vestrâ, aliquo apud Vos, utcunque immerentem dignati loco, spectabilem adeo, & valido Philosophantium immixtum corpori voluistis: ac prisca, deque meliore metallo fœcula novis cumulata fulgoribus, tanquam postliminio revocastis. Id mihi vero si eodem referente præclaro Naturæ Mystâ: *ante me ipsis Græcorum imperitasse inertiæ ipsas ideoque & ingenii quadam sterilitate solum natale necesse erat animi bona exsorbere: Regesque nunquam bonore artium coluisse, & in æstimatione has præ se tulisse, opum immortalitatem sibi per illas propagari arbitratos.* Vos longo Europæ imperio; diffusis per terrarum orbem Coloniis profligatis opibus potentes, omnes Artes fervoris jampridem jugo domitas, mitori prælio, vestris secundum libertatem datis, illustratis: Dum Vos inter & Reges, & Dynastæ (quod olim magno illi Senonum in votis) philosophari res, promovere eas, & excolere sibi laudi ducunt: Vosque ipsi externorum quoque [illegible] consociatis laboribus, velut auxiliaribus copiis, virtute potissimum vestrâ, scientiæ

[illegible] pomœria publico bono ; nec fine [illegible] , ac ut [illegible] , in [illegible] perennatura vestri nominis fama , [illegible] proferre [illegible].

Vestro igitur judicio opus [illegible] hunc , reliqua [illegible] , ad [illegible] , si Deus dederit , urgent nostri fœtus , quod serius quam fieri expetunt , in [illegible] tam , venerabuntur [illegible]. Restat [illegible] ([illegible] ad [illegible] probum : verùm O utinam !) necne , talo steterit [illegible] ; [illegible] candidiùs pronuntiaverit ? Nobis [illegible] , fervente [illegible] , [illegible] eis horis (nec enim [illegible]) nisi Minerva , ac [illegible] filo , non [illegible] tamen concinnatum , Vobis in perpetuæ observantiæ testeram obla[illegible] inani haudquaquam , ni fallimur , spe ; fidenti illud à Vobis animo , nempe quorum ad præfectum jussu pertextum fuit , ac latum , ut fieret , fronte exceptum iri. Sed nam [illegible] Vos morer [illegible] ? Cœptis [illegible] propitiam , hoc ergo agite , Vim Præstantissim. & conatibus nostris favete. Nos autem [illegible] agglaborabimus.

PRÆFATIO.

M[illegible] *verum est, Plantarum genus, quod civilis, nitidior* [illegible] *emergentia phænomena sæpius repetita pateant, minusque urbanam* [illegible] *cessit diversas vegetantes aëres plantas, eò quia lo*[illegible]*gustia venditarum aërem non ad*[illegible] *eas diu commorari non licuit, tum ob domesticas curas, tum ob molestam mi*[illegible] *licinæ praxin, quæ t*[illegible] *addita, aliquid* [illegible] *Gallicarum matter.* [illegible] *ta methodum. Minimarum p*[illegible]*rum longam disquisitionem exo*[illegible]*bam; & imper*[illegible]*lis indago erat; ut unus Naturæ operandi modus, simplexque, & patent*[illegible] *plantarum structura, & co*[illegible] *pages crescerent: quoniam tamen a mari distamus,* [illegible] *e nobis otium est, ut singula vi*[illegible] *sopiare*[illegible]

ut. Icones parvæ meâ manu expressi, licèt microscopii ope ad [illegible] *eidem partes fig*[illegible] *numerum fere excrescerent cujuscunque? quali & analoga Naturæ methodo, eas tantum delineavi partes* [illegible] *e vacuit. S*[illegible]*ofmographi locos insignes sol*[illegible] *tio præcuntis, h*[illegible] *ta, adumbrare potui; ut n*[illegible] *facilioris intelligentiæ gratiâ quælibet vasorum species, & ip*[illegible] *rant. ſue, & valis pa*[illegible] *ana licentiam qu*[illegible]*nque*

DIVISIO

DIVISIO PARTIS PRIMÆ

ANATOMIÆ PLANTARUM.

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EPISTOLÆ quædam circa præmissos Tractat. de ANATOMIA PLANTARUM, ultro citroque à MALPIGHIO & OLDENBURGIO scriptæ, in quibus quoque Observationum de OVO INCUBATO, aliqua fit mentio. 1[illegible]

MARCELLI

MARCELLI MALPIGHII;

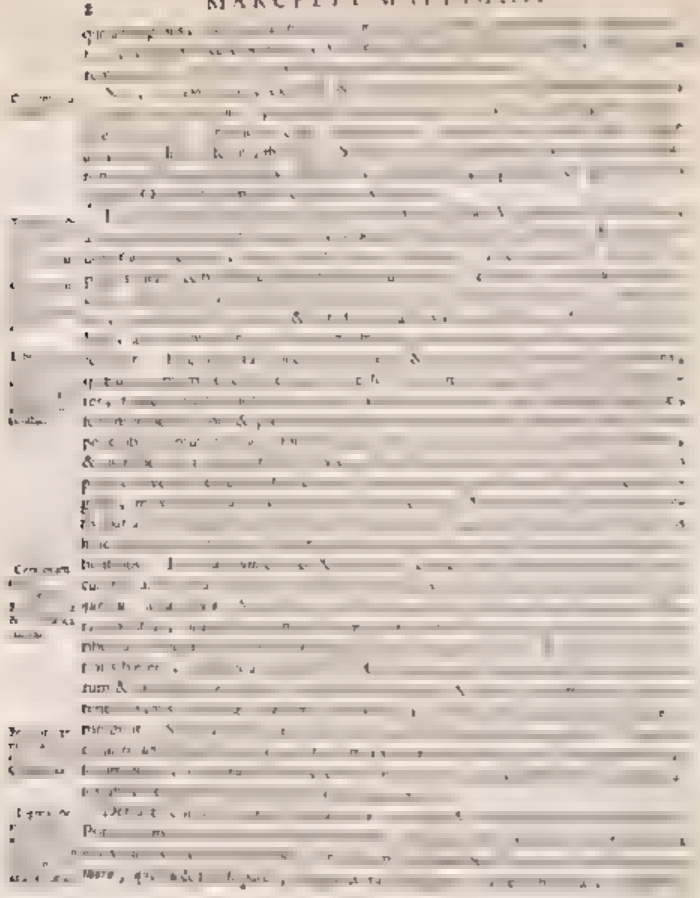
E Reg. Soc. Anglicana,

ANATOMES PLANTARUM IDEA.

MAGNÆ SOCIETATI REGIÆ ANGLICANÆ

Marcellus Malpighus S. P.

Bonarum art[illegible] incrementis, *Sodalitia Doctorum*, non [illegible] ades, [illegible] inque [illegible] tractatorum methodus, a [illegible] [illegible]. Cui [illegible] [illegible] [illegible]



[illegible] tenui ſpi- rituoſum

[illegible] medullam versus non interruptâ ſerie deducantur.

[illegible] Vaſa ſpi- ralia

[illegible] Vaſorum ſpiralium

[illegible] efficiunt

Componuntur expoſitæ fiſtulæ zonâ tenui, & pellucidâ, velut argentei coloris, lami- Fiſtulæ ſpi

[illegible] nium divisâ ramo vel caulis adhuc vivaci

[illegible] remanent. Eremus

[illegible] ſervant; ex quo fort

[illegible] An hujuſmodi ſpirales fiſtu [illegible] tracheæ; pro ſolo aëre

[illegible] a Natura inſtitutæ, exantlabo; & an ſimul cum aëre

[illegible] inquiram,

reor, quibus lac, terebinthina, gummi, &
amygdalarum cortice circa trachearum fasciculum p
p

in *quercu*, *populo*, & aliis
colorum est. Tenella est ligni substantia

bus, quæ in *Eruca* & *Aurelia* latitant.
per peculiarem ductum delato probabl
ri licet in animalium offibus, quæ iamiam, ligni indu
tandem affuso succo indurantur; quod mire in *Dentibus* et

gulis tenellis furculis. Hæc globulorum multiplici
constat, qui membranosi utriculi sunt, ut evidenter patet
In caudice *Sambuci*, interiora tenet medulla, & utricu

concrescat, vel fusco inficiatur co
trum occupat, sed in plurimum lex
meridiem, minuitur adaucta sensim figuræ p
tiones, propositis diversis transversalibus segme
mam plures extant in furculorum tegmen
medullam horizontaliter continuati
ra, ideo quærendum erit, an

ex ful m furculi vasis segmento, copiosiùs

tatos continent. Hujusmodi utriculorum ordines versi

bione, & stipa

idales partes divisæ, producuntur; quæ

vasa lactea.

baceis exponetur, delinea-

tionis structura.

[illegible] nondum explicitæ, trunco constat ligneo, [illegible] fibris
[illegible]s & tracheis excitatur, à pention ligno cum [illegible]
[illegible] teret implantationem, comi[illegible]
[illegible] squamarum instar, parum ad invicem
[illegible]
[illegible]
[illegible]

licet in *fœniculo*, *brassica*, & simil. Varium circumscriptionem in diversis plantis
fortiuntur folia; peculiares tamen formas, [illegible] icone illustrabo.
Hæc in singulis plantis extensâ pollent corticis [illegible] fibris & tra-
cheis irrigatur. Enascuntur in quibusdam [illegible] de, in reliqua
verò alternatim unicum promittit folium, vel alia, exponenda, metho-; corticis
[illegible] portionem,
cujus medium trachea occupante, foni pericarpium in pluribus efficit, qui
[illegible] um foni exit recessu,
divisis & productis fibris, & tracheis, hi rete ex mutuo [illegible]
vasis accidit, spatia verò appendix atri[illegible]aria pollent figurâ in diver-
[illegible]

Varia circumscriptio.

[illegible]

horum *aperture*, *secundum*, &c.

[illegible]

Anticipata ipsorum productio in *moro*, *capsi*, &c. delineabit [illegible]
[illegible] idatis configurationibus, compositionem describere tenta[illegible]
[illegible] ribus primò furculi fructiferi, ubi semen conditur, in ovale
corpus exten[illegible], cujus tamen caro, seu pericarpium, in prima productione non
[illegible]

[illegible] nam, delineatis præcipuè [illegible]
[illegible]

Semen diversis capsulis involutum.

Subjectum [illegible] contentum *semen* diversis capsulis seu involu[illegible], [illegible] munus explent. In [illegible] an etiam aperiam exercit[illegible]

Structura pericarpii.

& primo pericarpii [illegible]am, exordio tum pro[illegible]

[illegible]

Cerasorum succumdatum cuticulum. *Cerasorum*, *uvarumque* caro reti[illegible] plexus, à quibus pendent utriculi, pellucidi. *Pyrorum* &

[illegible]

[illegible], graciles utriculi succo tu[illegible]

mali aurantii & limo carpium, cujus exterior caro com[illegible] ulis, velut intestinalis cutis, ac[illegible]

[illegible]bus succum ferat [illegible]

quæ [illegible]am fasciculis; [illegible] tiolo ductus emanantes, mox [illegible] tremo [illegible] de, [illegible] &

Progressus. les excitatur, & in hos solvitur. In [illegible] enim interiora tenet, & semina exte[illegible] pericarpii parum ex[illegible] [illegible], quæ [illegible] ancéque pericarpii supplet. I[illegible] [illegible] & [illegible] *herbaceis* loco pericarpii siliqua extenditur, quæ fibroso pi[illegible]

[illegible], & fele impraegnant hos, cuticulantur, &

[illegible]

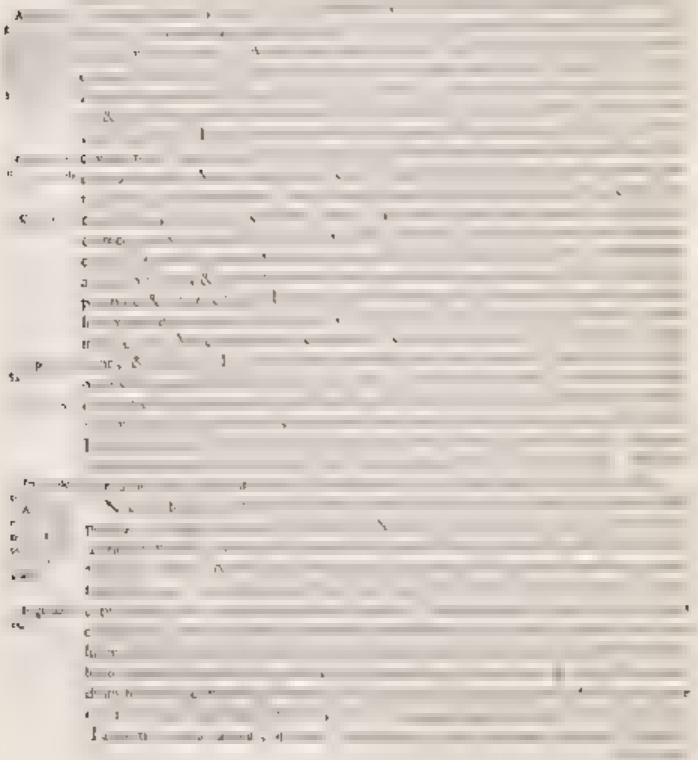
Capsularum, & membranarum partes, vasa [illegible] versus, vesicas, loculos, spica[illegible]

Structura. Nec sat tuis N[illegible] [illegible] nimine observandis, [illegible]

[illegible] endentia.
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
tus aperitur, laxato exteriori cortice, unde plan[illegible]
ut in *pyris*, *pomis*, & simil. mirari licet.

Tantus partium apparatus in gratiam conditi f[illegible] l[illegible]
autem est *fœtus*, vera scil. planta, suis ut[illegible]
[illegible]
[illegible] caulem seu ca[illegible]
[illegible] solaper costlat, & germinante sem ne in quam[illegible]
hæc folia caudici appendantur, à quo germen seu surcu[illegible] &
evidenter plantulæ seminalis species in[illegible]
[illegible]
contorta. Evidentissimè hæc patel[illegible]it delineata à primordiis successivâ plurium se-
[illegible] produchione : Nam primò in colliquam[illegible]
fo[illegible], velut alis, trunco exili appensis, emerg[illegible], &
crassiora reddita ita contorquentur, & complicant[illegible]
mentis receptaculi, vel corticis, ut alienam indu[illegible]
[illegible]
Naturæ, fœtum hunc in colliqu[illegible]
doque alterâ, foliorum hiatum replente, d[illegible]
la, *pomo* & *leguminibus*, quorum[illegible]
ponam, seminalem han[illegible]
[illegible]
quod de *Animali*[illegible]
non adamul im *eandem* se[illegible]
varias addam figuras, *avenæ*, & *tritici* præcipuè, [illegible]
[illegible]
aris verò seminibus, p[illegible] bulbosis, plant[illegible]
componitur pluribus, quæ foliorum vices so[illegible], seminis vero cors[illegible]
caro, placentæ vicaria, hinc inde[illegible] *oli hyacintho*, *tulipa* & *asparago*.

Exaratæ Seminales plantæ, quasi [illegible] involucro custoditæ, à siccitate



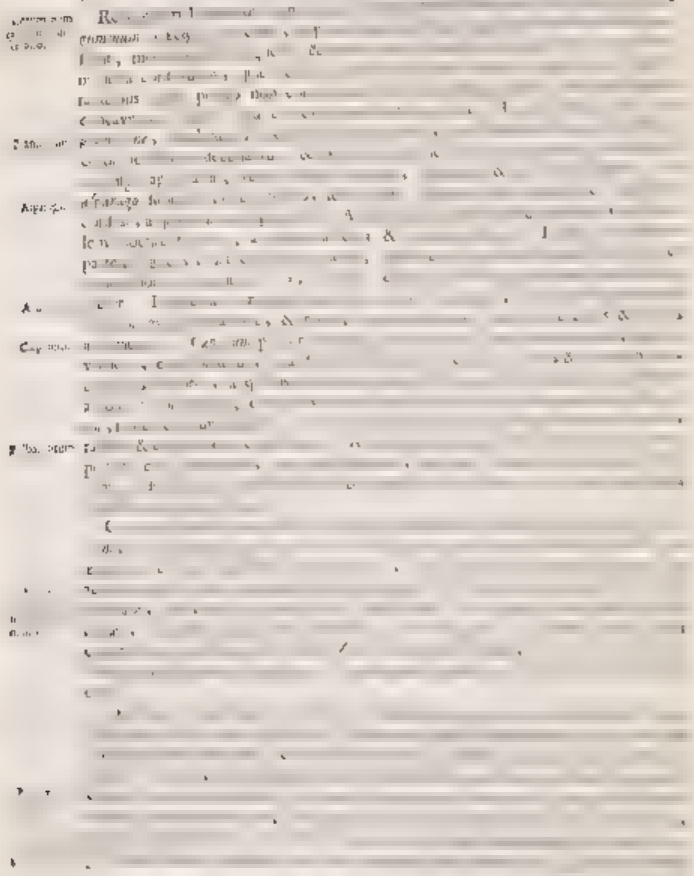
[illegible] strandi locum aperire valentur, ova in auctumodi

[illegible] Sunt autem *radicem* arborum

[illegible] Spirales fistulæ productæ incl

[illegible] parallelæ, nec rectæ, sed varie obliquantur, varicosæque

[illegible]



[illegible] tracheæ, radices copiosè componunt, & aer facilis sursum [illegible] opus & energiam, ideò aereum & halitus ab imo terræ de- [illegible] scabo

[illegible] vas succum, me[illegible]ctis sub specie, modo gummi, mo- Succus peculiaris plantis adest.
dò terebinthi[illegible], cum proprio vasculo ostendam, ide conjectans, [illegible] tantibus [illegible] esse succum proprio vase delatum

[illegible] ces promat, & [illegible], [illegible]s tamen [illegible]; excrescat; unde alimenti via invertitur.

[illegible] lentem pariter esse prop[illegible] reddatur facet[illegible] locata, substantiam e- [illegible], & [illegible] à lateralibus filiis alimento. Hanc positionem [illegible] in fouis, bulbis, cortice, & lignea portione.

[illegible] gneas fistulas, & corticales, [illegible]rem versus ramos & to- Humor per fistulas vertes ramos & folia ascendit.
[illegible] quàm communem esse [illegible] cucurbitæ, à seminis carne producto- [illegible] pere, [illegible] & auctione e[illegible]

[illegible] & Pericarpii humor, [illegible] acculi, conlos[illegible]m hum[illegible]

Datum BONONIÆ

Calendis Novemb. 16[illegible].

MARCELLI MALPIGHII,

ANATOME PLANTARUM.

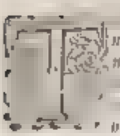
MAGNÆ SOCIETATI REGIÆ ANGLICANÆ

M [illegible] S. P

[illegible] Quoties [illegible] Deprehendi, defectu [illegible] Ex hoc [illegible] pro [illegible] pro [illegible] Aqua [illegible] pro [illegible] Terræ [illegible] Cui [illegible] Ego quoque [illegible] Orbi [illegible] Promontoria [illegible] Regnum [illegible] Veneto.

PRÆFA-

PRÆFATIO.



[illegible] Scienda[illegible] [illegible] nus, quod relicto materno terra sinu liberum, aquam, vel aerem, vel ip[illegible] oras pervadit, in hominum sapientiæ libidinem jugulatur, reli[illegible] parens, tenter assurgit: Hoc autem sub variis Plantarum speciebus in [illegible] satius dicamus, terram ipsam a lumen ingens esse, in cujus officinis alimentorum digestiones, excrementorum pr[illegible]re, thoracis loco, & lubrer[illegible]nis capitis, varias & multiplices Plantarum contexturas, qua novum sui generis cerebrum co[illegible] Exumpentium hujusmodi plantarum acervum tam ferax est, [illegible] possit ordines; antiqua enim distinctio, in arborem [illegible], [illegible]s quoque invenit difficultates apud [illegible], [illegible]n generibus contents, fruticum & [illegible] [illegible] attenta varia seminum & foliorum forma, reliquique phænomeni[illegible] [illegible] tum genera adeo multiplicaverint, ut eadem planta sub diversis speciebus [illegible] defignatur, unde [illegible]mpossibile videtur, plantas omnes in determinatos ordin[illegible], [illegible] [illegible] unt sola duritie vel mollitie varia[illegible] [illegible] e simplicissimæ, teneræ & bu[illegible] quasi arbores dici possint. Hoc[illegible]que viventium org[illegible] [illegible] [illegible] ingentes operosa excitat moles; quare quicunq; animus tra[illegible] [illegible] mice Lector, [illegible] [illegible] prosam saltem oper[illegible] phænomena, [illegible] [illegible] extensum [illegible] [illegible] [illegible] [illegible] coactus [illegible], [illegible] [illegible] [illegible] in incassatumum jejunus, nec in tentaminum [illegible] ius exitu: Qualiscunque tamen sim, ne dedigneris; utpote congr[illegible] vito, qui Botanicis non assue-

D E

Fig. 1.

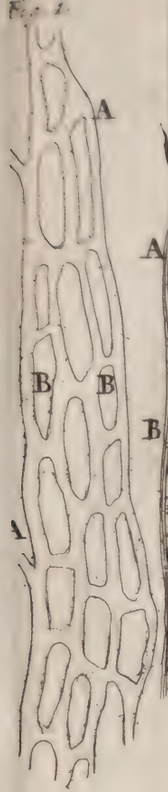


Fig. 2.

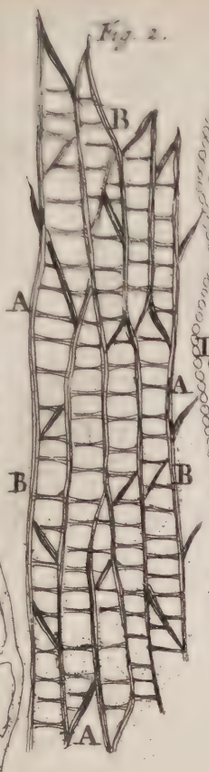


Fig. 3.

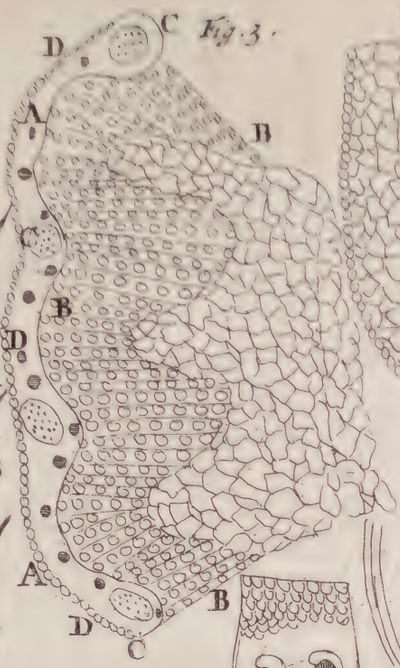


Fig. 5.

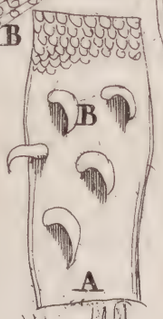
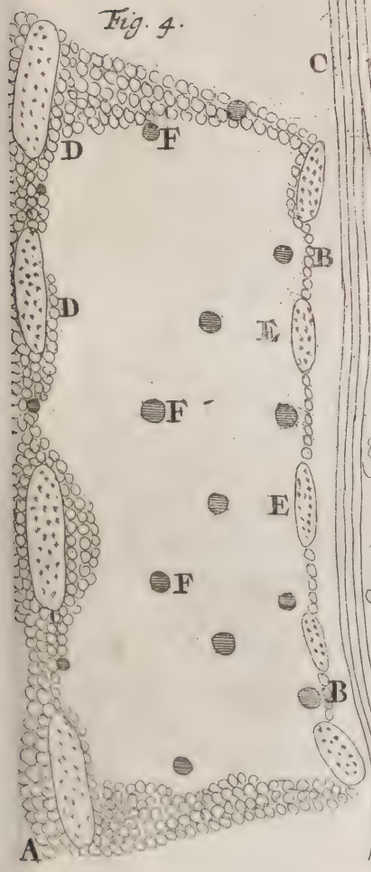
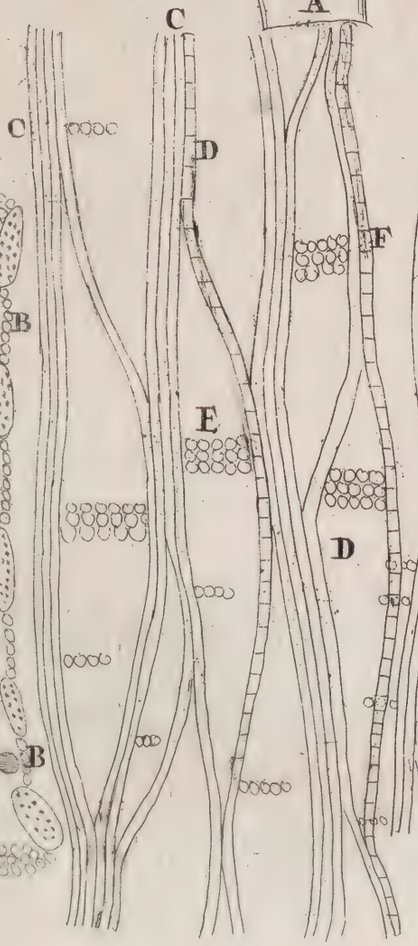


Fig. 4.





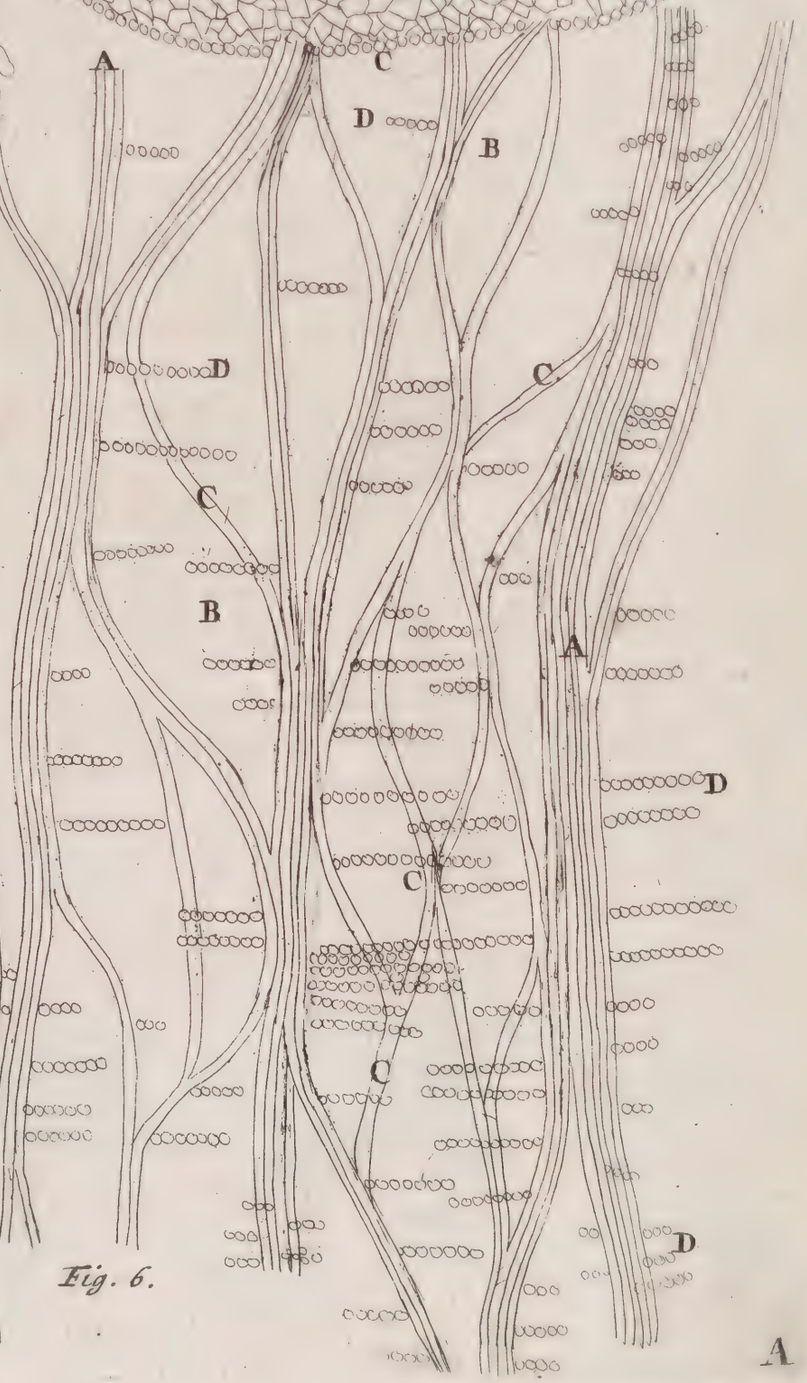


Fig. 6.

A

De Cortice.

DE CORTICE.

[illegible] s, caulis autem in herbis, ſpeciatim [illegible]
s calamus appellatur, ſcapus [illegible] minibus, & calmus in frumentis [illegible]
[illegible] ſignis thorax, [illegible] que Naturæ officina cenſen[illegible]
[illegible] im viſcerúmque ce[illegible] donatur, quæ ut hæc huis vegetent
ſuóque in numere cuſtodita pe[illegible]
accidit, quæ ſuis cooperiuntur integumentis. Externus [illegible] e hoc involucrum, quo
[illegible] mo Natura utitur ad c[illegible] lam totius plantæ pe[illegible], Cortex dic-
[illegible] da viſcera pareat ad-
[illegible] to a ſimplicioribus ad [illegible]
[illegible] nplicatiores ſtructuras procedet exerci[illegible]

Cortex externus plantæ interior. Dictus [illegible]

areæ utriculis repiuntur, quorum [illegible] pta cau- Cortex.

craſſior eſt cortex, cujuſque exterior ſuperfi- Tab. 1
, cujus ſpa- [illegible]
ſa ſerie Cortex.

[illegible] im conſtant formâ [illegible] n
[illegible] tores. [illegible]

[illegible] om conſtat partium apparatu, vel talem, quæ verſant in Tab. 1
s, manifeſtiùs nobis patent. In hujus ſi mento horizontali exteriùs utri- [illegible]
[illegible] a cuticula, puis conſperſâ, [illegible] atur, horumque co[illegible] tota Cortex.
[illegible] ad horizontem ſubſtantiam B caulicul ſcatet. Inter has [illegible] x
[illegible], ſeu fibræ, in faſciculum C coagmentatæ, per lo[illegible]
que lacteſcera D patent, hiatu lac effundunt. Nectitur autem [illegible]

[illegible] rata emergunt in crasso *apii rustici* 4 cortice, cujus exteriorem p[illegible]
[illegible] rdi parati intuenti
stulatum ora D patent. Cor[illegible]
men fasciculi E minores f[illegible]
num, gummi, lactis instar, [illegible]

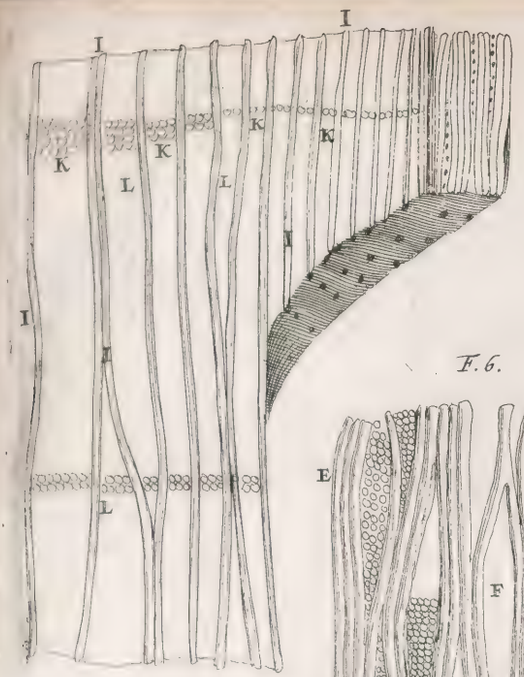
[illegible] æ lustravimus [illegible] expositis plantis, ob exiguitatem non fa[illegible]
Evidentius autem manifesta[illegible]
mplici & distinctâ de[illegible]

In *Cucu[illegible]is* 5 cortice, ablata cuticula *A*, quæ cæ[illegible]tidis ipsius [illegible]
sibi recurvis, cooperitu[illegible], [illegible] quibus fibrarum mul-
[illegible]
volueri instar, per longum fibræ, reticulari opere contextæ deduc[illegible]
in fasciculos C col[illegible]ar, non unam perpetuo sequuntur costulam, sed frequ[illegible]
[illegible] terum obliquatæ p[illegible]
[illegible] E copiâ replentur vicissim conæ[illegible]
[illegible]it subjectæ [illegible]iæ, quibus velati te[illegible]
[illegible], quarum [illegible] sensim minores sunt, & acutiorib[illegible]
Cucurbi- pe lignum *liber* excitetur, in quo libroru[illegible] fasciculi pa[illegible]
tæ. mæ sunt areæ. Quælibet fibra, seu lig[illegible] fistula, tot qua[illegible]

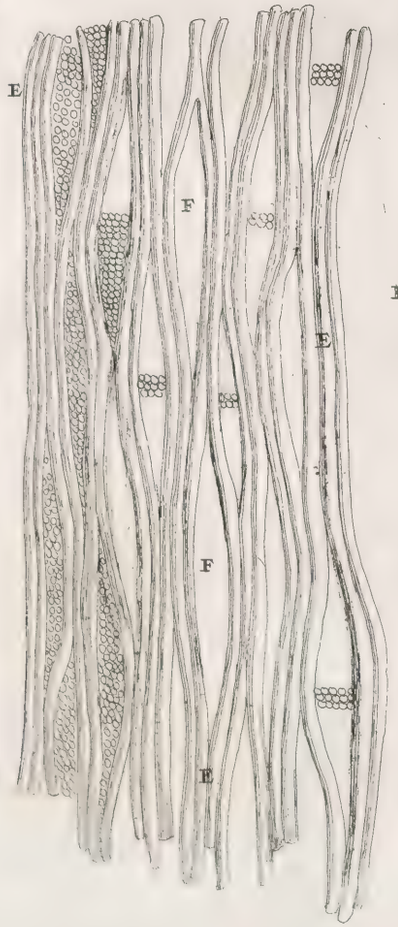
Trag. de- In *salice*, & *populo* 6, evidentior emerg[illegible] structura; in hac enim [illegible]
scriptio de Salicis & Populi cortice. asper est, nam suberescentibus interius singulorum[illegible]
cùm dilatari nequeat, necessariò solvitur, unde
etiam cortices non pauca crassities aris periodice foliaris. A[illegible]
in *tenella populo*, [illegible]
rum C obliquitate. A singulo fasciculo *A* pendent & exoriuntur utriculorum [illegible]
D, qui horizontalem servantes litum, versus lignum præcipuè dirig[illegible]
per areas *B*, intrà elongatæ, cortici crassitiem excitant; reliquæ vet[illegible]
[illegible]ir. Succedunt subjecta reticulata involucra, quorum lignea
[illegible]

[illegible]am I numerus, quibus tota arbor ami[illegible]
am ordines & racemi K mutant; sensim
mm fuæ interciptantur utriculi inter reticular[illegible]

Tab. II.



F. 6.



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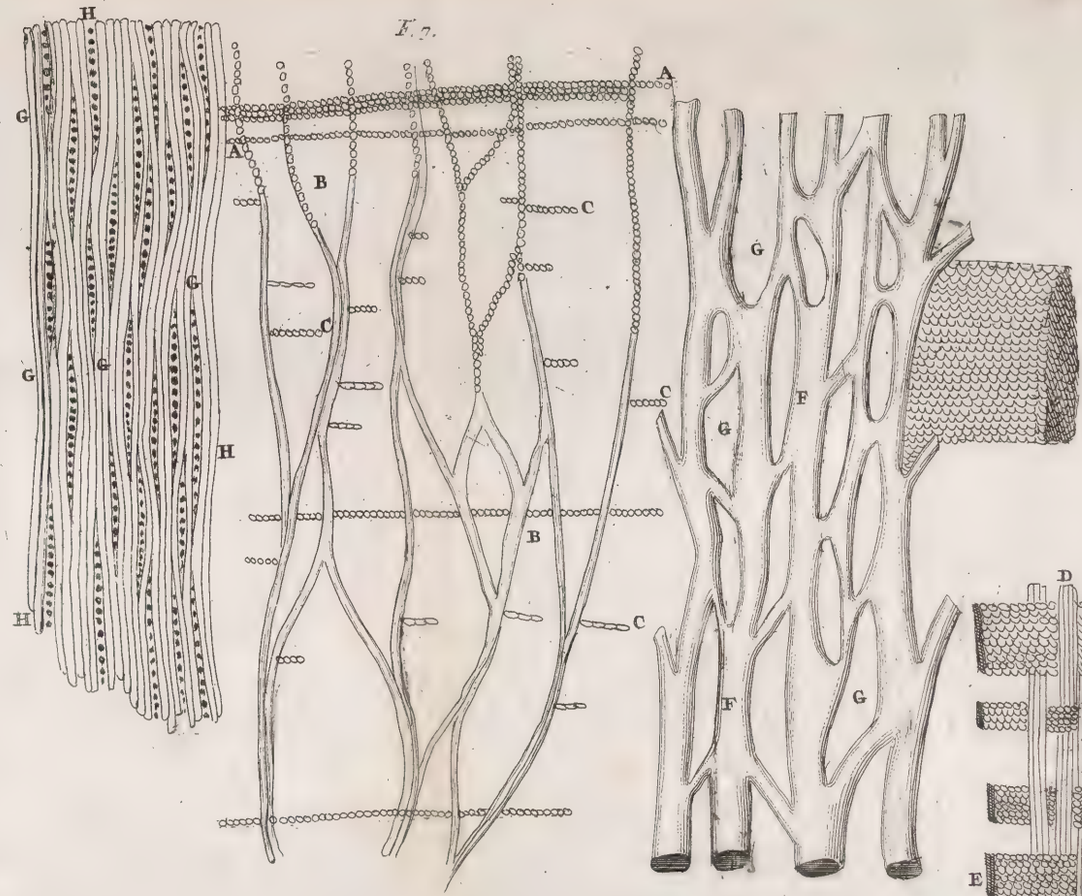
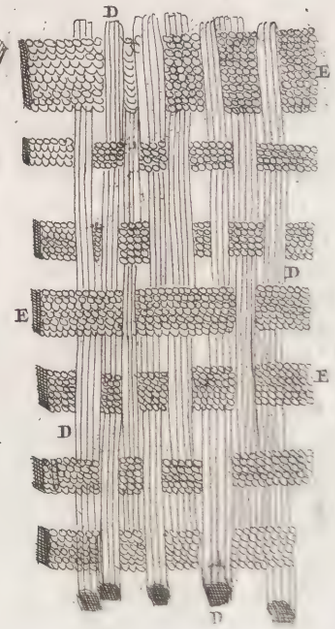




Tab. III.

Fig. 8

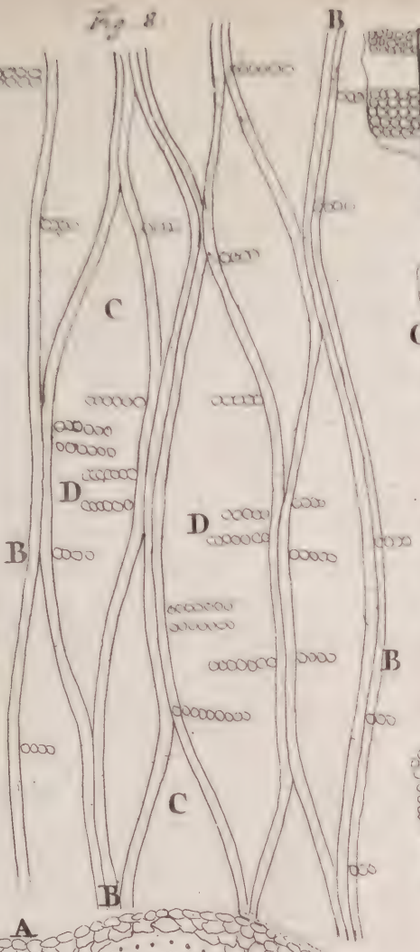


Fig. 11.

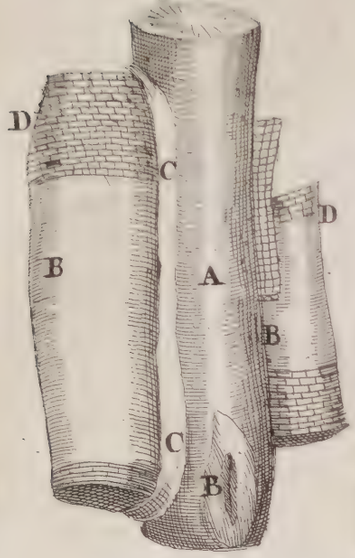


Fig. 21.

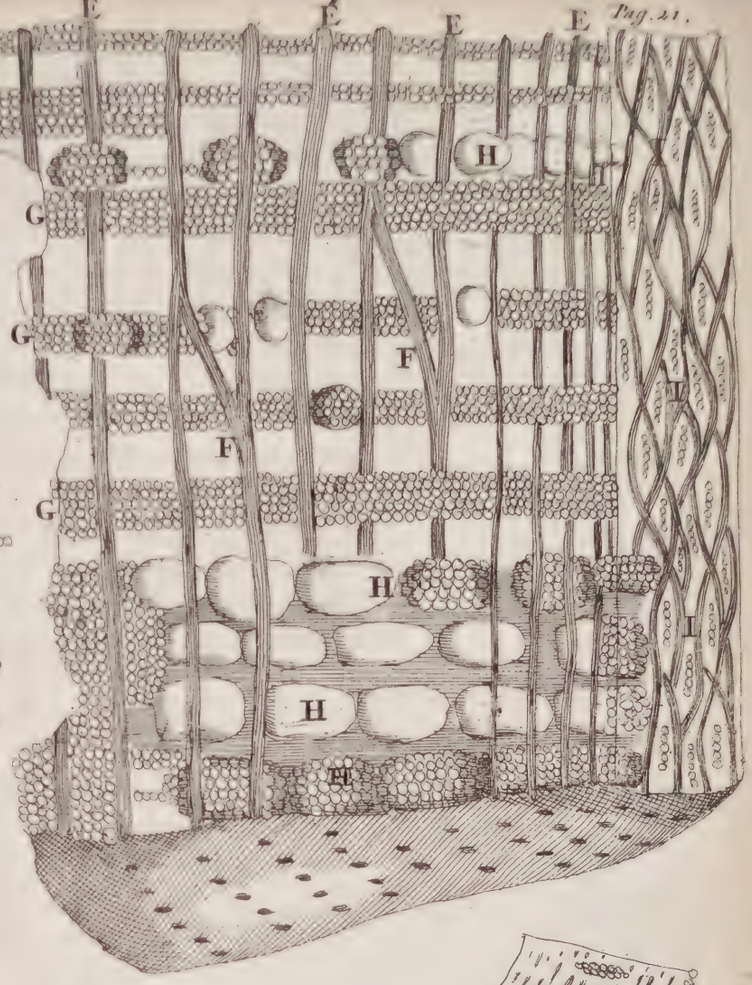


Fig. 10.

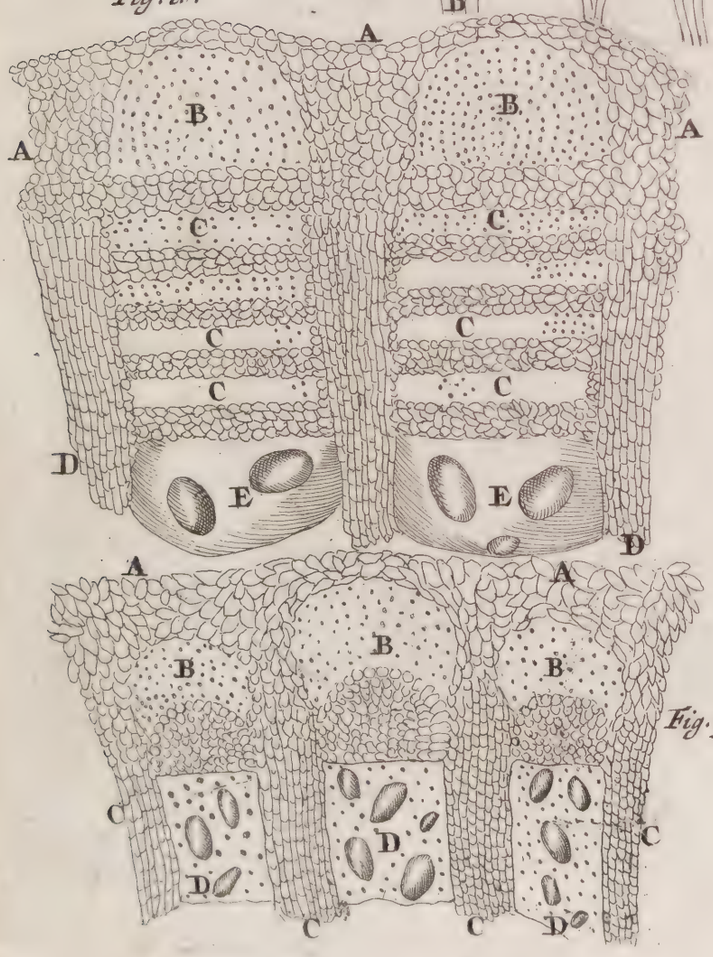
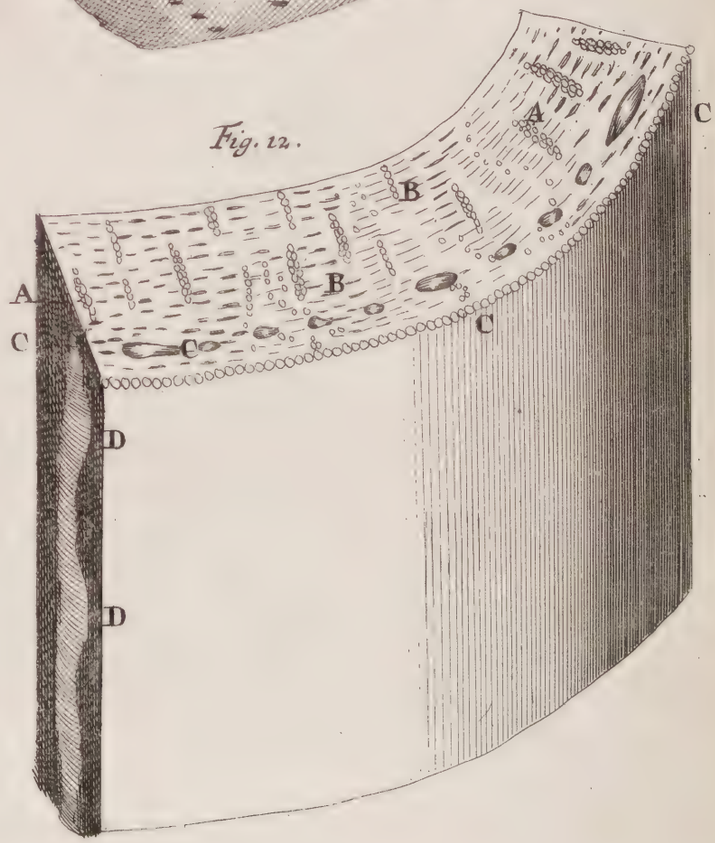


Fig. 9.

Fig. 12.



[illegible] quæ succedit *cortex* structura, in qua nobis [illegible] Tab. II.
[illegible] per long[illegible]

A fibrarum fasciculis pendent de more utriculorum [illegible]es C, quæ partim versus li-
[illegible], &
[illegible], &
[illegible]næ sint, fabrubrum indica[illegible]
[illegible]tiones, quibus cortices crassiores componuntur. Eleganter itaq[illegible],
&
[illegible], &
[illegible]dentes
[illegible]culorum quasi fascia *A*, quâ externa superficies co[illegible]r; sub hac fibrosum rete de
[illegible], cujus vasorum [illegible]iculi *B*
[illegible]antur, q[illegible]ulorum horti-
[illegible] Plures fi[illegible]braram & fe cor
[illegible]ticularis succedit. Spat[illegible]
quitate fistularum relicta, [illegible]iorum sera-
gium penet[illegible]unt, nam
[illegible]
succedit. Hoc peculiare tamen observatur in *quercu*, quod pop[illegible]s &
fama[illegible]ate est; inter utriculorum series da[illegible]corpora *H*, tesserarum instar, obtusis ta-
[illegible], & fere ossea, q[illegible],
[illegible]zata corpora *H* irregulariter hiuantur, & in tenellis etiam corticibus, minora tamen, concrescunt. Aliud pariter in cort[illegible]geno *quercus* observandum contingit; præterea [illegible]orum ordines *G*, a[illegible]
areæ *hori I* occupantur, [illegible]am interseruntur horiz[illegible]
[illegible]amplæ, quæ[illegible]educuntur; [illegible]
[illegible]petrificantur, & fax[illegible]e portio-
nes *H*.

[illegible] calida *&* frigida, ex diei noctisque vari[illegible]s craſſibus,) ejusque ela[illegible], quæ exteriora corticis involucra urgens, contentorum liqu[illegible]ora versus promovere &[illegible]nt, & erumpunt[illegible]& *gallarum* diligens indag[illegible]huiusmodi exortum[illegible]quod [illegible]carpi[illegible]rones abun[illegible]onſtra[illegible]deus humor, *chyli* [illegible]r, exonerat[illegible]ſ, &[illegible]tium utriculis, præter inutilium transp[illegible], [illegible]ccos, [illegible]. Hujusmodi itaque concretione continentium utriculorum ordines perfth[illegible]tum, ſi cortex abundantius & validius pabulum, præ reliquis plantaru[illegible]bus, igni ſubminiſtret.

Abundantiorem concoctionem in utriculis celebrata tum ravum ille[illegible]*cupreſſo, pino, & abiete* terebinthinæ ſpeciem parantur; in al[illegible]*ulo, cucumere, apio ruſtico*, &c. lactis inſtar, dubitari poteſt. Petu[illegible]ſeri & lignum, & reliquas veg[illegible]ant, & concocto qu[illegible]t ſucco, q[illegible]ſtionis con[illegible]ſtantes.

[illegible]&illegible[illegible]ent ſubſtantiam. In *libro*, Natu[illegible]brarum ordines de novo excitat, vel ſaltem au[illegible]dæ alimoniæ, permittente mollitie, aſſuefcere cœpit, & t[illegible]p[illegible]& ita fit novi[illegible]ei & re[illegible]tem eſſe corticis portio[illegible]tuam, (ut in *ſalice*, *populo* [illegible]germinatio item & foecun[illegible]quæ plurimum aeris in[illegible]cta, exanemas & rigida redditur, *libro* additur, qui & tacita[illegible]

tice privari, foliaque cuticulâ, vel exiguis fibrarum falciculis dor
in quibus per longum tempus exigitur augmentum, in corti
rorum delineatione, lignearum fibrarum ordines in *libro* para
ac inpore

DE PARTIBUS CAULEM VEL CAUDICEM COMPONENTIBUS

majores fiunt, pl

Fig. 13. Pag. 14.

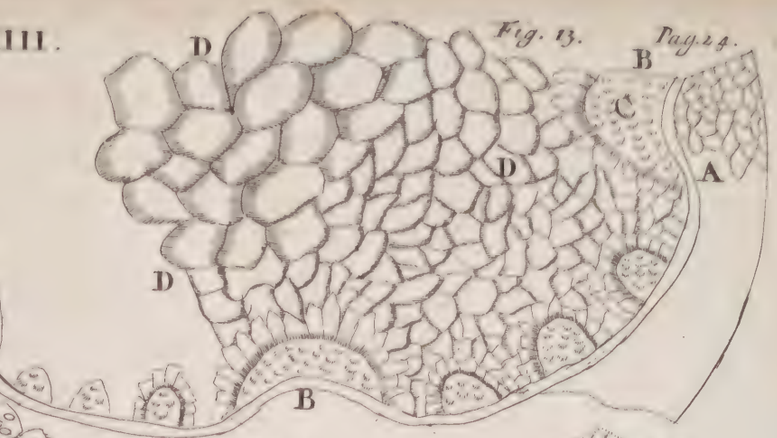


Fig. 17.

Fig. 15.

Fig. 14.

Fig. 16.

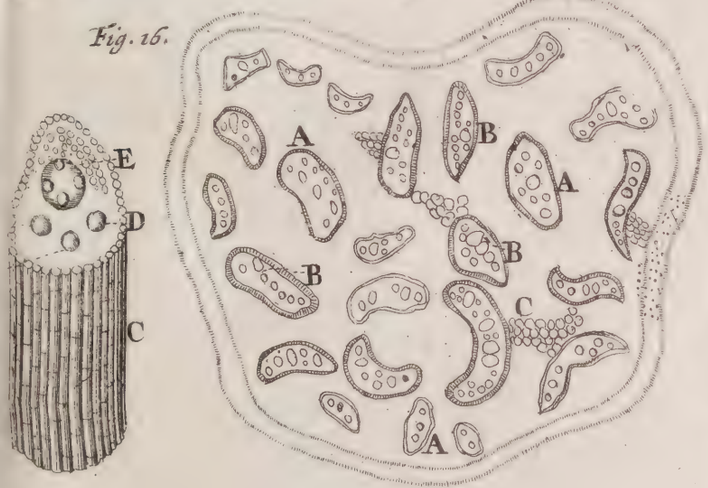


Fig. 19.

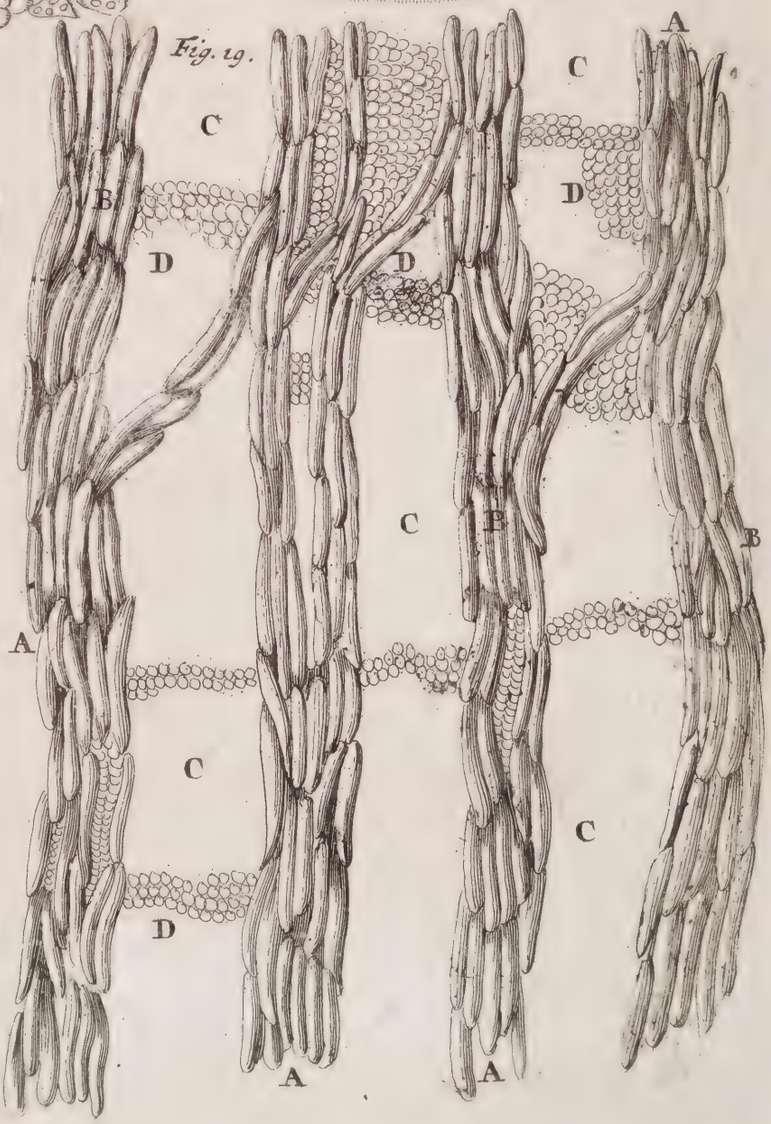
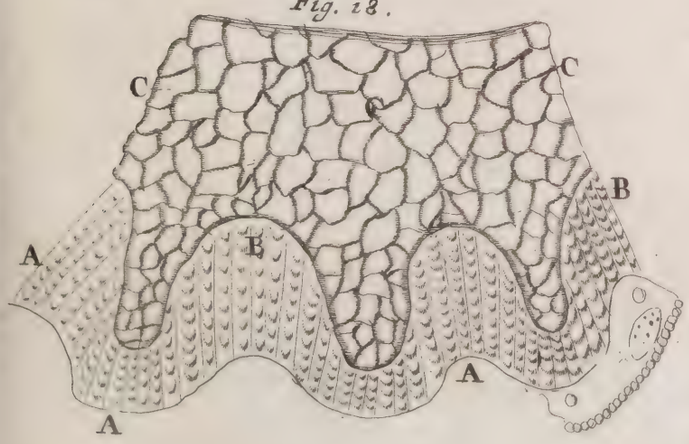
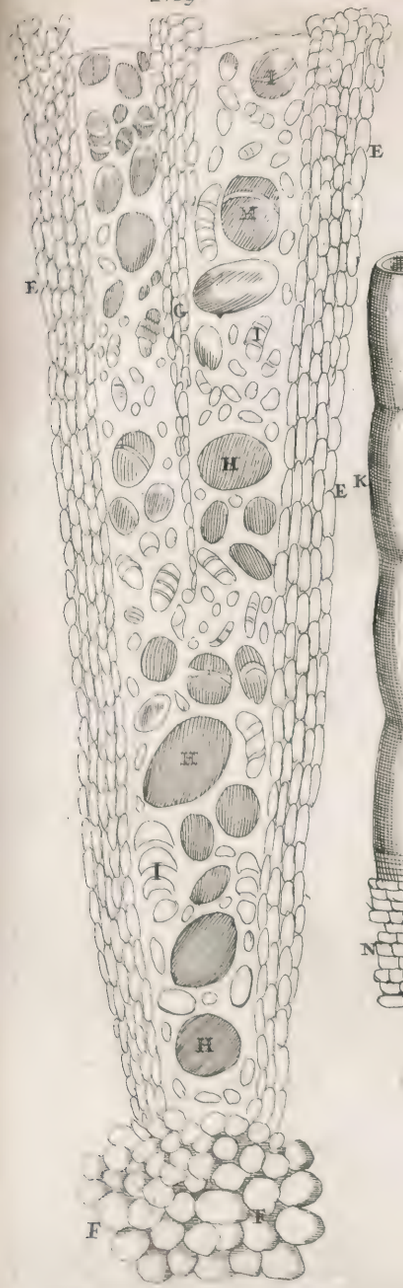


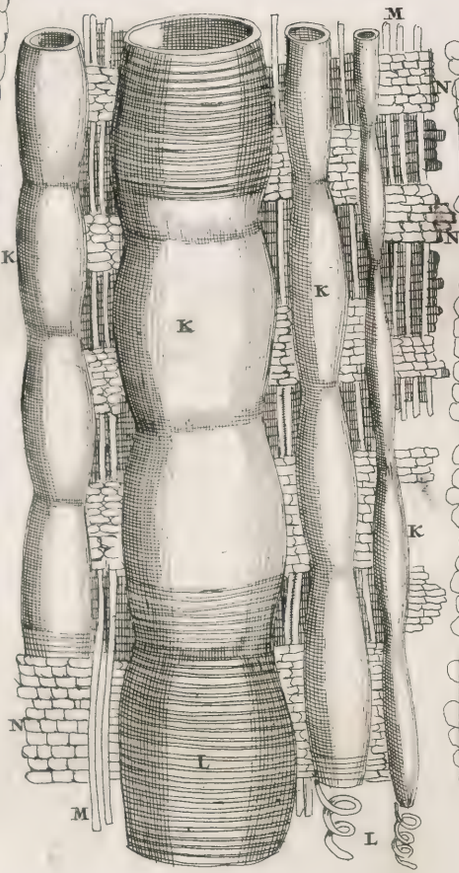
Fig. 18.



Tab. V.

F. 19.





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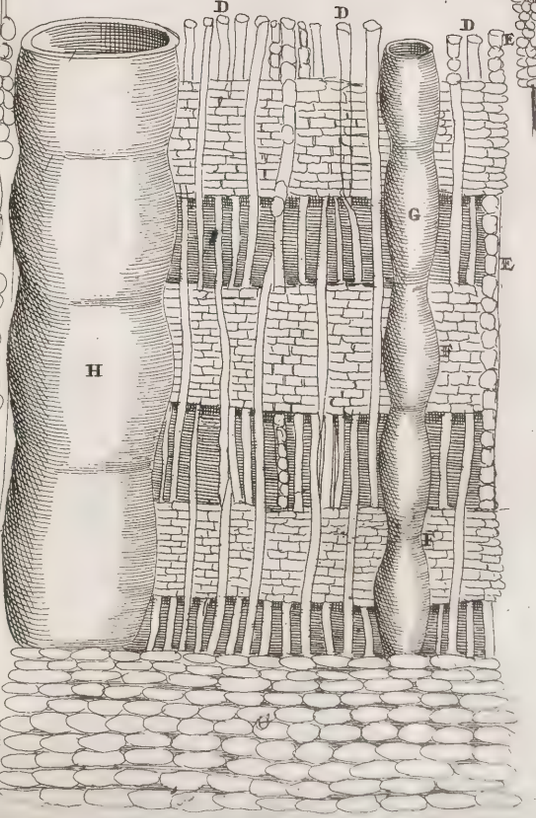
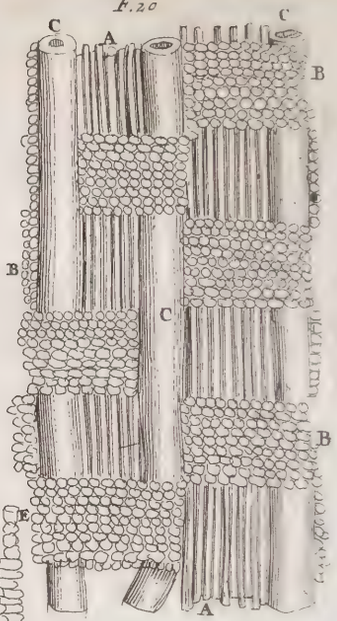


F. 20.



[illegible] Invenimus eadem
[illegible] ubi partes foliatores reduitæ ligneam magis lapsunt naturam
[illegible] arum compagem *filicis* caulis 16 possidet. Hujus vari, copiosiq
[illegible] e ordine situati, diversimode conglutinantur, & in medio
[illegible] , &

3. In *palma*, & *arundine* [illegible]
dispersis enim fibrosis lacteolis & spiralibus [illegible]

[illegible] nen *ordine*, multumque proximo ligneæ *arborum* portioni incu[illegible]
[illegible] mur 17, circa cujus exteriorem oram ligneæ portiones *A*, [illegible]
fistularum spiralium ora aperiuntur, versus centrum quasi tot [illegible], &
hinc [illegible] acibus ordinibus ambiuntur, ita ut involucrum
fiat foliosum & densum. Inter [illegible] versus, magniores locantur lacteoli *B*, qui
[illegible] spiralibus fistu[illegible] & [illegible] ntur: Tota p[illegible]
laccatis seu u[illegible]

[illegible] res redditi, multis fistu- Fig. 18. Caulis Cocothæ.
[illegible] , & reliquum utriculorum serie *C* repletur.
[illegible] mus ad frontiorem l[illegible] cc[illegible] nem n
[illegible] & [illegible] tur, & [illegible] 19, avulso cortice, Tab. IV & V.
[illegible] offert: Hu usmodi
[illegible] it: Tenui conf ant membra-
[illegible] ni excurrunt. Intermediæ areæ *C*
[illegible] Inter a cortice de ducti in medul-
[illegible] m ramo seu ca dice: hujusmodi
[illegible] mnes plam[illegible]
[illegible] mni tere continent formâ, perfa[illegible] m
[illegible] , [illegible] *C*
[illegible] ar ellum aut cuticulares ramos; & [illegible]
[illegible] cum reliquo cortice, componitur Intercepta area in [illegible]
[illegible] laris, & quandoque [illegible]
[illegible] cia juxta se posita *I* efformant. Ambiuntur autem à fib[illegible]
[illegible] , & [illegible] iversal[illegible]

solvantur. Lamina hæc, si ulteriùs microscopio lustretur, parti

rum ordines N superequitant, ita ut fiat velut floreæ

tudinem excurrentes locantur, quæ patulo ore

fluidæ d exeuntur, obi quæ tamen, ut areæ B refultent, pro diver

fericbus horizontaliter ductis. Præ

tubulosæ sunt, orbiculis invicem hiantibus & contextæ, & tri

graciliores. Tubulosa hæc

colons est, & in spiram contorquetur; hæc eadem

culorum squamatim contextorum speciem exhibe

tus, indagato ejusdem ligni horizontali segmento

prosilliui excurru

m deducti,

&

Fig. 21.

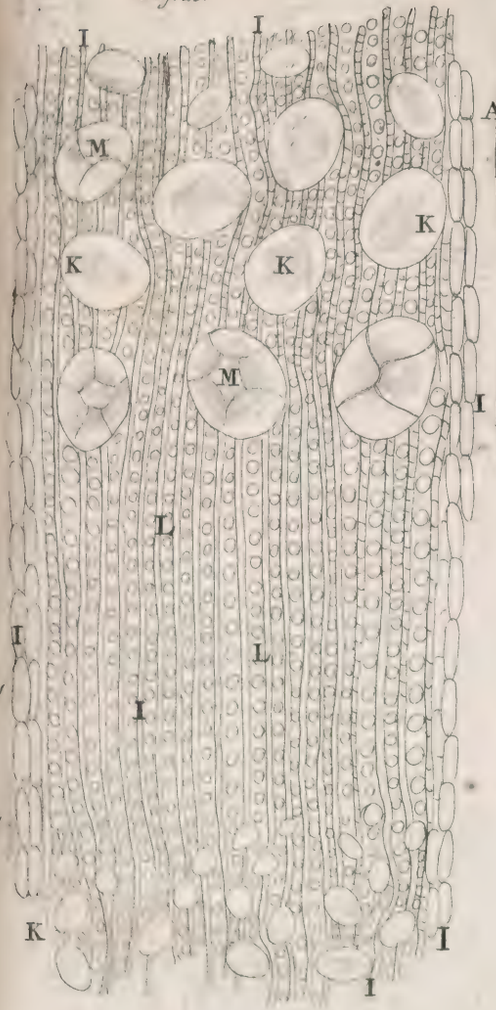


Fig. 23.

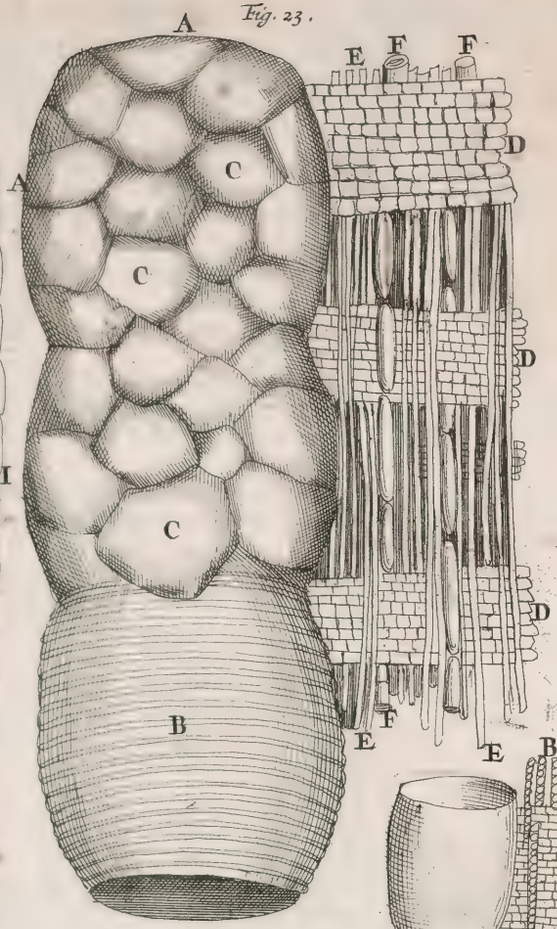


Fig. 22.

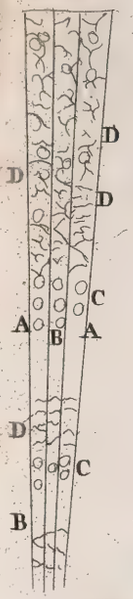


Fig. 24.

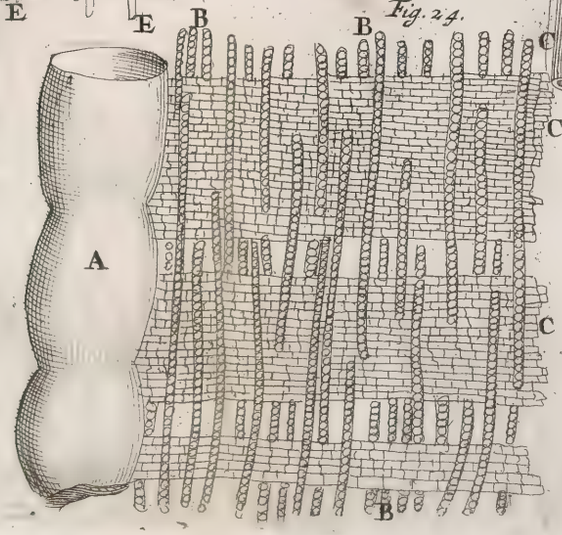
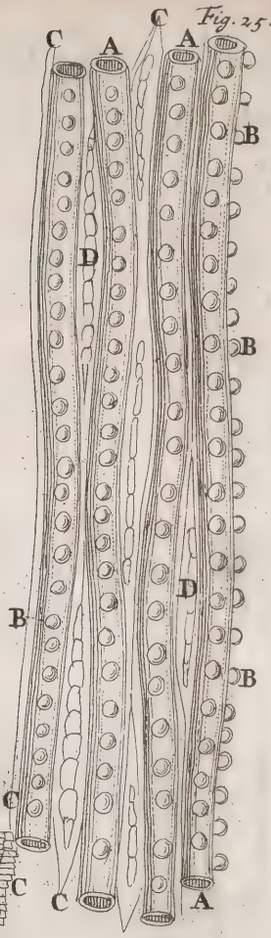
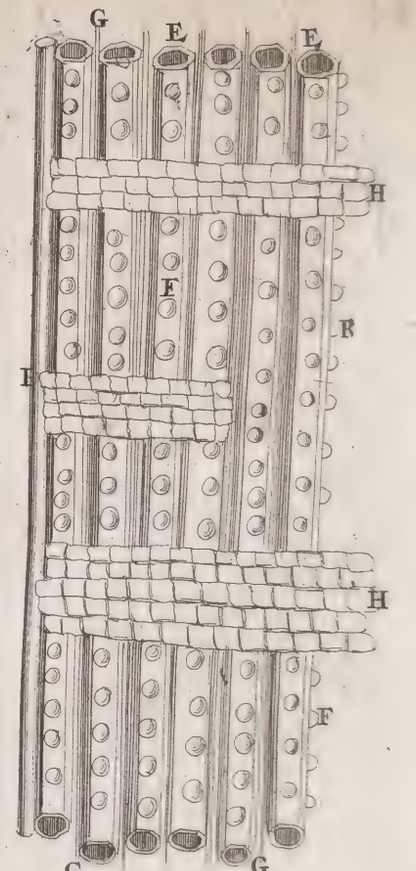


Fig. 25.





[illegible] rachearum insignium K, quasi toc[illegible] tes, [illegible] centrum complent, reliquum verò areæ Ipsarum, [illegible] K contentum, m[illegible] fasciculis tracheis I occupatur. Ampliores Ispirales filu[illegible] K, frequenter *pulmonares* quasi *veficulas* M, trac[illegible]um tollantiâ excitatas, continent hæ quandoque invicem h[illegible] rdum ovali conftant formâ, & altero nonnunquam fine introvii funt; [illegible] diffimiles pulmonatibus veficulis insectorum extent

[illegible], & [illegible], pr[illegible] f[illegible], [illegible] emergunt; inter quas ligneæ portiones B intercipiuntur, in quibus [illegible] appendices D, diverfam fubftantiam & colorem [illegible], interferuntur, quæ continuatæ cum transversalibus utriculorum ordinibus A, quasi per[illegible] racemi non immerito cenfendæ venunt.

[illegible] & [illegible] tium compage. In fecto p[illegible] tranfverfum ca[illegible]ce, trachearum infignium ora fub[illegible] [illegible] p[illegible] [illegible] q[illegible] [illegible] g[illegible] [illegible] [illegible] [

Tab. VII.

Fig. 31.

Fig. 29.

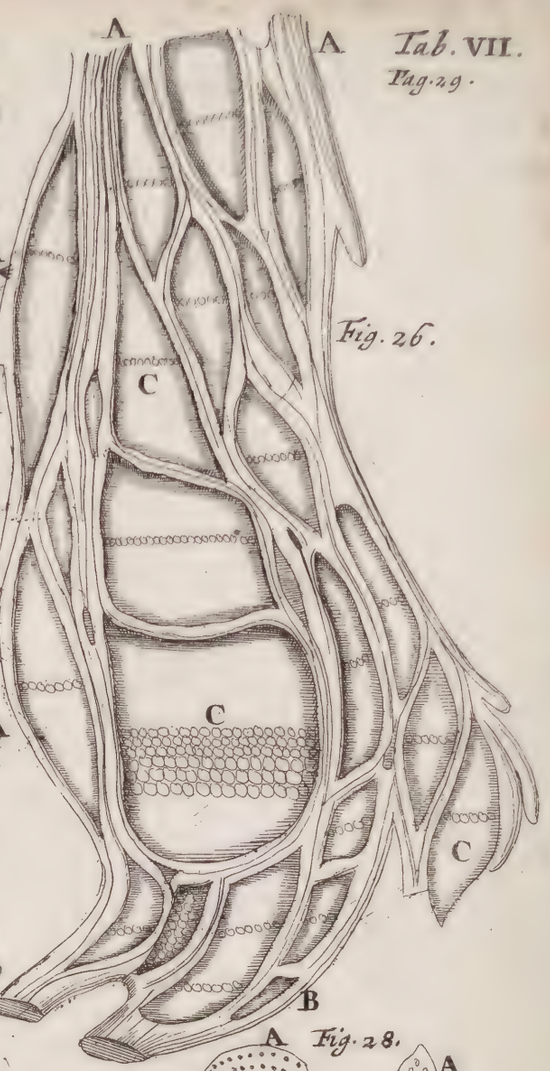


Fig. 30.

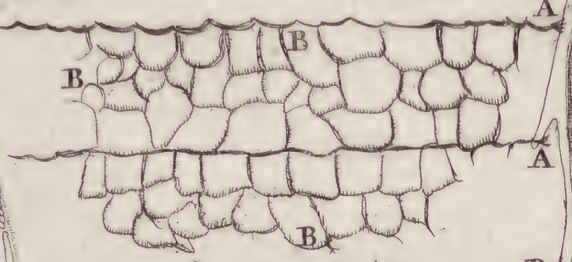


Fig. 27.

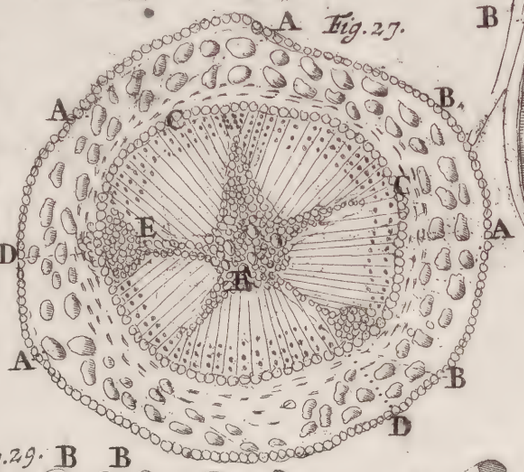


Fig. 28.

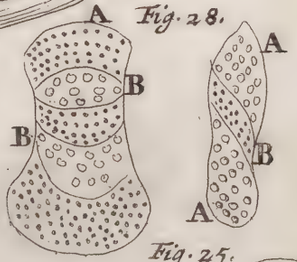


Fig. 26.

Fig. 29.

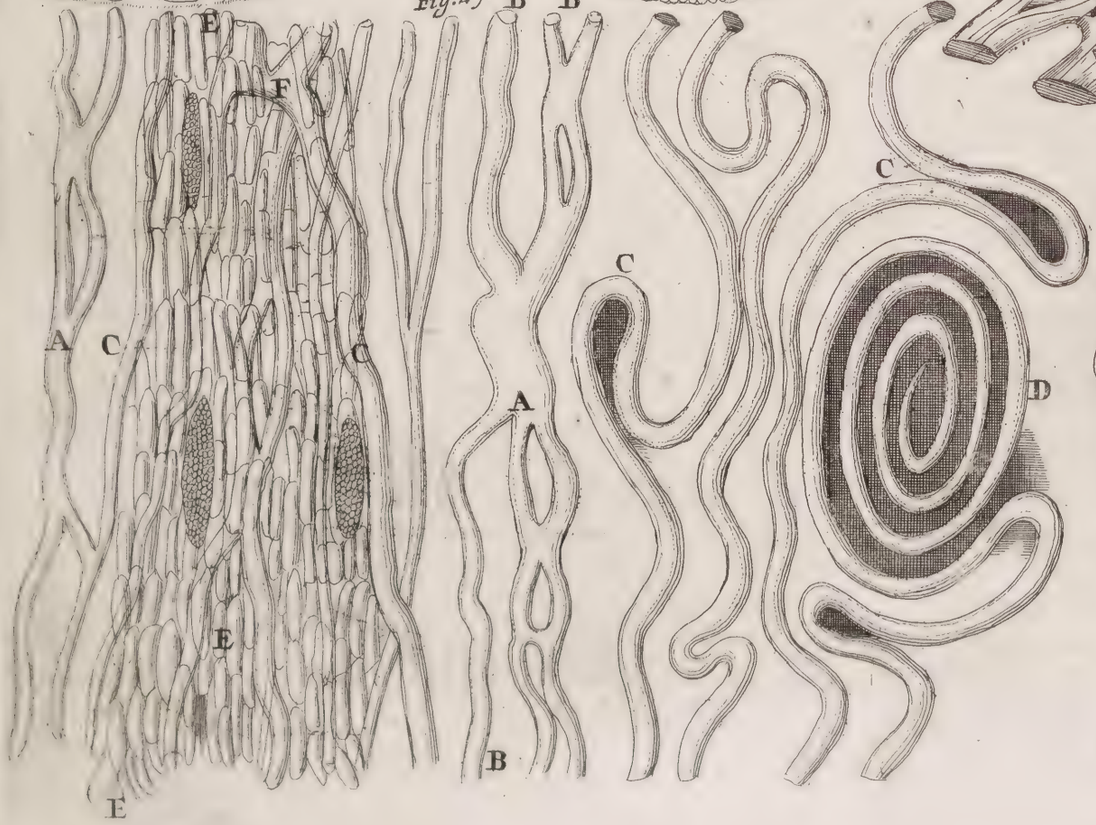
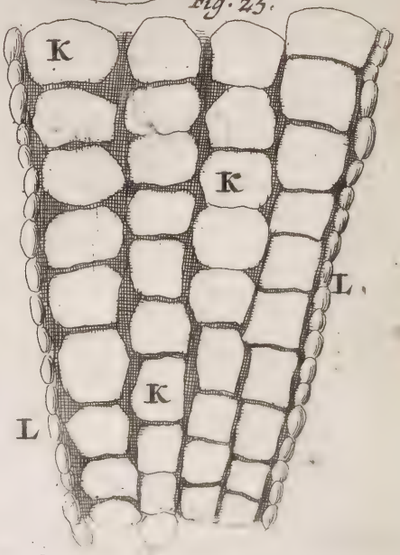


Fig. 25.



exteriores & subcrescentes ligni particulæ, per modum involucris successive

tores seu toros, quasi nodos, excitent. In hoc itaque excita

ies & revolutiones labyrinth

Ita ter ducta fibræ succo repleantur, qui ex Natu

ex toto occludentes locant

culis & grandioribus etiam ramis, apice inferius hu

licari vidimus, unde ligni robur & al mento

nes multi-

in recisso trunco, superficie adhuc radice, m caudicis; hoc præ Tab. VI.

cæteris in *queren* & *robore* 26 experimur, cujus caudic s fruit dum

speciem: Sursum elong ascendi *A* diversas

efformant, quarum consi

gentibus utriculis C, lax

fam ferè acquirant formam

quentiùs tamen ad ov in accedunt, & urgente fibrarum textura

munitur. Tenuip brana quæ fr liditatem tractu tempo-

to, la

consumptis ligneis vasculis, ut

irrigant: & in medullæ utriculis *sambuci*, *ebuli*, & hum varicum-

am plexus luxuriat, quo tan rectus fi-

& hinc inde pend

inde ab appendis & promissis utriculorum

ûus, utriculorum ordines, ex seu & cont

lorum finis in arbo um caudice, ac sic n

s fions, à quibus exoriun

horizontalem ant; quod in ca

mode locari vider m. Uterc

exponenda, i inducare videtur, in qua præ

rtus continuata.

in penitioribus ligni circulis. Quare rationi cont
frequentissimas prouti hujusmodi appendices, seu
lorum fibras, quæ contiguis unitæ, & horizon
, &
ales utriculorum ordines, à cortice emanantes, per
nuis in medullam exonerantur, unde eadem natura in
que cortex, cùm sit veluti ligneus infans, cujus partes non
nec firmatæ subsistunt, suæ auctionis materiam in pendentibus u
& ,
cortex ,
& eadem phænomena, quæ in corticis utriculis conti
,

In ramo *populi* vetustissimæ, cujus furculi & minore
tutâ per transversam sectionem, cortex crassus occurr
ras *A* inter minores utriculos contineos; interius d
nt ordines *B*, sub quibus utriculorum minimorum zona *C* ex
neum cylindrum ambit, cum hac tamen ratione, ut gemmis in
non tantum utriculorum eadem species auxit, seu & tartarea corpora
c

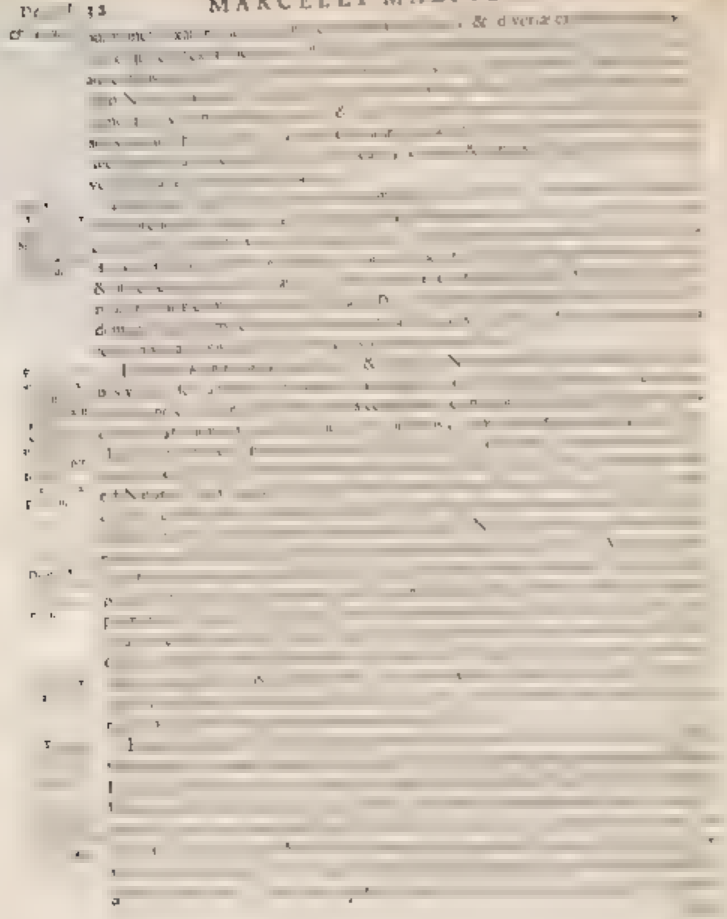
In *fenestratis & frutectibus* quib
tasse ut in liberiori loco multiplex humor excoquat
citò crescunt, citò pariter pereunt; aqueus chim
tentus, non talem præbet soliditatem, quiem
culorum ordines imperbuntur. Quare probabil
hujusmodi medullas, transversales ex utricol
fibrarum fasciculis pendentes, nec fib
reliquis ligneis arborum contexturis acc

Medullæ usus olim inhamis, co di & cerebri

Probabile igitur est, succum, qui per fibras

tentior est, tantò fortiùs coctionem [illegible] signes fistulas perpetuò patulas [illegible] fas *spurales*, à compositione, placuit interdum [illegible] s mihi annotare in [illegible] truncis, cauliculis, foliis, floribus, reliqu[illegible] gis & minus copiosæ luxuriant, tarèmque nan[illegible] in cauliculis quarum[illegible] plantarum, trachearum collectiones ligneis fibris ità ingeniosè affectantur, ut Naturæ mysterium necessario fabr[illegible]

Cimara 28 caulis intrè con[illegible] B in[illegible] & [illegible] cauli A unicum fibrarum acer[illegible] [illegible]em superiùs innuimus; argentea natur[illegible] lamina in spi[illegible] os & cticulas, perfumes infectorum pulmonibus [illegible] *sicut* in nobis [illegible] nes annuus componitur, qui [illegible] & [illegible] nous nexibus continuantur; ubi verò illa in pulmone



antur, ſic ut ſu & l
ones per arterias recipiant; ità in plantarum pulmonibus vereri poſſumus,

In
& ce
ſe in arbo mante

erum profecta eſt o, non tantùm, ut facilius ſales, liberiores reddit pertran-

ibus, quibus vegetatio promoveri poteſt.

ras deregit, curſum ſubnectam ego, conten- Arb Arbor

factione diſtrumpere fibrarum compagem, & robuſtiſſimas etiam arbo & h & c
tione, ſed ex ſucceſſivis diei & noctis immutatis eráſibus. Ut

[illegible] analogia, respirationis motus, dilatio fist. & [illegible] per lacteos & consimilia vasa, ità ex tracheatum dilatatione, intus [illegible] & ità probabiliter fit contenti succi expressio in contig[illegible] tumore, laxiores reddit oculi, & fistulæ lignear[illegible] morem; unde etiam in lignis pus, ig[illegible] extremas fistularum orificiis passim vide[illegible]

I[illegible] interceptis deglutendi [illegible] prio refertum succo, & [illegible] per mediam pe[illegible] creto meliori coloris succo scatent.

Varium [illegible] tæ, vario [illegible] guineo turgi- gruuntur, & sanguineo ferè turgida succo patent.

In *Aqua vitæ* [illegible] majus & reticulatum pe[illegible] longiori latitudine, rel[illegible] la; in reliquis verò plantis, ubi contentus humor [illegible] ri figurater concrescendo soliditatem non acquirit, ob exi[illegible] Ex perpetuis tami[illegible] dem vel saltem analogam servat in suis o[illegible]

Contentus succus, (ut ex nobis notis probabiliter p[illegible] modum & proprietates longè perfectiores habere videatur tento deprehenditur, ubi ma[illegible] & & simil. Elaboratior videtur rerebint[illegible] [illegible], ut lingu[illegible], exequendo hoc munere, præter exaratum vas, suo[illegible]

Succi hujus varia est natura; frequenter aquei dia[illegible] [illegible] Hic[illegible] in lanulas partes,

Tab. VIII.

Fig. 32.

Fig. 33.

Fig. 34.

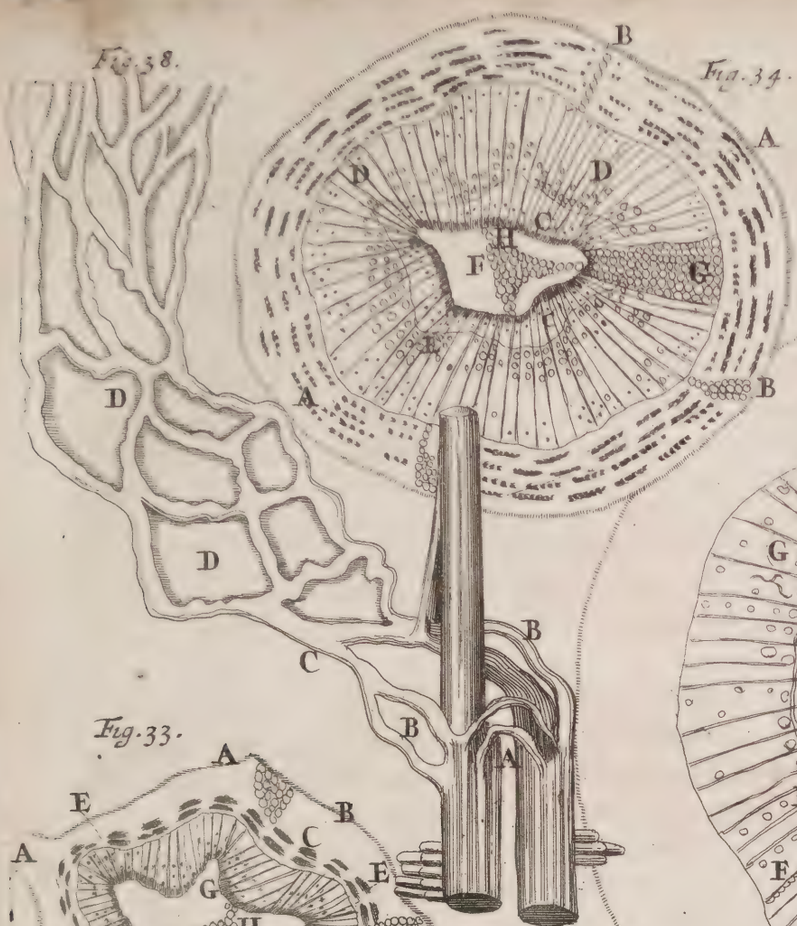


Fig. 35.

Fig. 36.

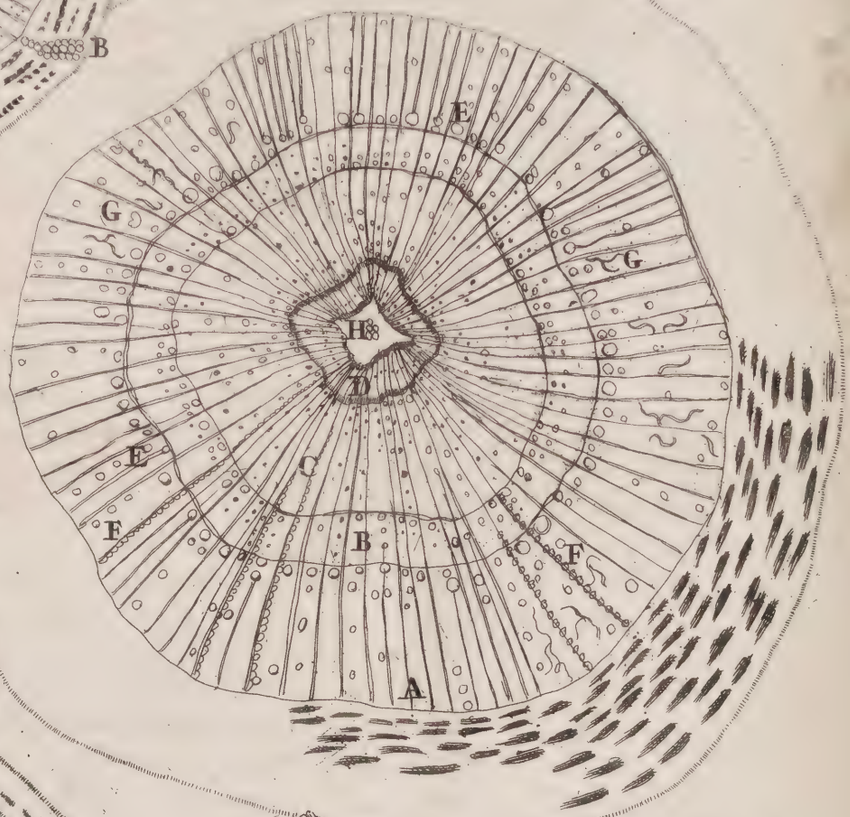


Fig. 37.

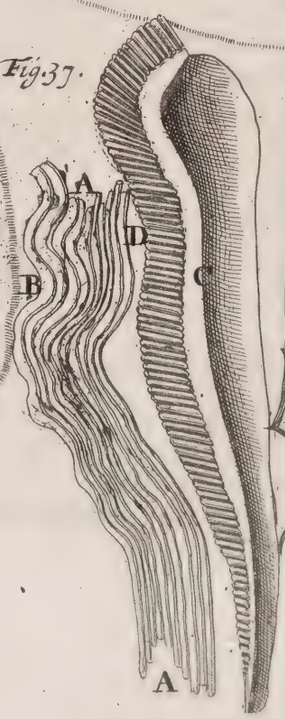
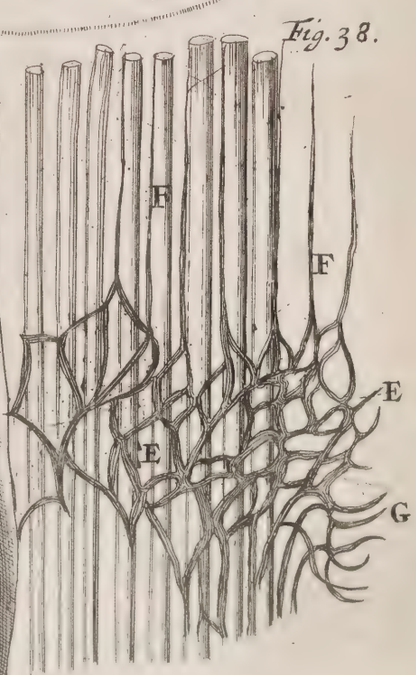


Fig. 38.



De caudicis augmento & nodis.

& conservetur, & ad [illegible] Quo, quo [illegible] & [illegible] fiat evaporet, nec exterioribus [illegible] [illegible] [illegible] & ubi eadem [illegible] [illegible] [illegible]

rete efformant par un à libri natura distans, compages exludante otico succo repletur, & fibrarum plana superaducuntur, qu debitam

[illegible]

eliandam soliditatem & con[illegible] vis offeis succus, velati à cribro, adhuc flu[illegible] retur, & extrudatur, q[illegible] [illegible] fanguineis, quæ frequentia intercurrunt, percolant [illegible] Offeis succus in animalibus lux[illegible], & ab ipsis offibus & tendinibus [illegible] observatur in huiusmodi partium [illegible]aris, & incisionibus. Male [illegible] ces tendines, temporis diuturnitate offei reddantur. In Gallinaceis circa articul[illegible] [illegible]us ichor consimiles p[illegible] ces, & [illegible] (quam adhuc servo.) Hæc suis circumdata mem[illegible] cerebrum cum appenso cerebello æmulatur, [illegible] fasse reor, & casu excitato offei succ[illegible] naturam & molem, tantori consonum est.

Horum & similium indagine probabiliter suspicari pos[illegible]us, fibris & transversa- Ligni foliati
[illegible]olorum ordinibus, quibus lignum con[illegible]extur, peculiarem affundi succum, [illegible]us; cujus corporaturâ & concretione [illegible] firmatas & duri- [illegible] L[illegible], ut recens ligno tabis [illegible], q[illegible] [illegible]chendatur in præ[illegible]xistent[illegible]gno; unde nova inducta

quam suberescentia insecta non erodant, unde re

plicantur.

Arborum igitur & similium Trunci, indeque

anno additis ligneis involu

ces, qui ex fibrarum implicatione fol

pondus sustinere valent. In Herbis verò assurge

lineavimus segmenta utplurimum dispersis per

exteriorum injuris facit

mune cum quibusdam Arbo

modum; *Nodos* scilicet, qui articuli & interdum geniculu

pucatio, ut &

Sub oculis ico

appone

fus, paulo infra nodum propagines emittit, quarum al

fasciculo insculantur; reliquæ verò B proximis fibris C affectant, à

& singulo fasciculo multi pilces prom

reliqua in gemmam desinunt. In arb

Fig. 39.

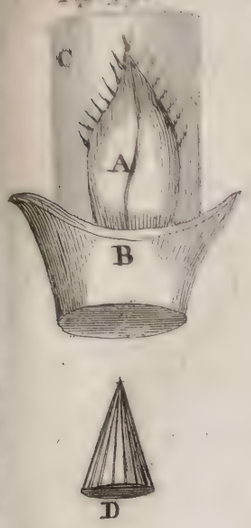


Fig. 40.

Fig. 41.

Fig. 42.

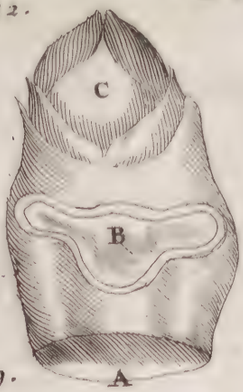


Fig. 43.

Fig. 44.

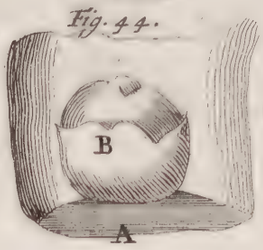


Fig. 46.

A
A
A

De Gemmis.

mant, ramum *foli.* continuem trunco; ut ferè in utroque à natura dotati alimenti rudimenta scelta promovatur.

Labor compensantur Caules & Caudices quorundam Fructicum, utplurimum tamen alibi nodosi [illegible] & reliquam plantæ fabricam [illegible], & radicibus [illegible] Caulium partes [illegible] breves, culmum [illegible], spinas [illegible], & nonnunquam plex occurrit [illegible] Caulium & caudicum quoque [illegible], & fibrarum vasculosarum [illegible] Caudarum compagines varias.

DE GEMMIS.

VEgetantium genus, ut debitam magnitudinem sortiatur, & suæ mortalitatis jacturam successiva prolis auctione reparet, variis temporibus novas promit partes, ut ramulum emergentes *steri*, recentes autem *soboles*. Emanantes igitur à caule, caudice, ramis, & radicibus novellæ hujusmodi partes, non statim laxa & extenduntur, sed compendio quodam coagmentatæ intra foliorum axillas latentes, non parùm subsistunt. *Gemma* autem appellantur, eo quod lacrymarum instar conglobentur, frequenter etiam *oculi* vocitantur. *Gemma* itaque sunt velut mitans seu teres quædam stolonis, ut suo tempore auctus, in ramulum exorescens, tandem *ova* promat. Hæ notæ hyemis rigorem ferè omnes *plantæ* nactæ à tenello succo nova germinant, & ita conformatæ, tandem utero vere aperiantur, & a foliorum. Speciali compage constant *gemmæ* hæ quæ ex intervallo, sunt quæ velut manus involutus, seu cuticula, in qua compendio quodam stirpis futuræ partes. Gemmæ ad horas foetus. Cortex juniores exemplat.

Singularibus stirpis *gemmarum* formis, & figuris exarabimus. In *arundine vulgari*, oblonga eminet gemma 39 *A*, è singulo nodo [illegible] foliorum insertionem [illegible] conspicuum, [illegible] formâ mitratum depressâ, geminis excitatur foliis quorum peripheriam pilis C, sursum directis, crispis & candidis, ornant; intus [illegible] vestitos, viridibus foliis, [illegible] amplectantibus exparsum more exsiccatorum. Tab. IX. Fig. 9. Gemmarum structura in arundine vulgari.

In *acca* pariter gemmarum species simplicissima est, unico enim foliorum ordine 40 *A* contegitur, caulem simulatis ramorum foliolis *B*, singula sanguine seu cinereo pilis hirsutisque coopertis. Fig. 40. In Acca.

Eadem fere structura in herbaceis, & præcipuè in *Fœnu marti a purpurea* 41 conspicitur à cujus axilla, seu sinu caulis *A*, *gemma* [illegible] gemmas coopertas foliis *B*; reliquas intus custodiunt, & turgent, ut [illegible] corpus. Fig. 41. In Fœnu-marti a purpurea.

Aliæ gemmæ occurrunt passim in arboribus, & arbustis [illegible] ficu, tubo [illegible] nucis, vitice, & *rosæ* 42. Hæc autem turgescunt [illegible] vere [illegible] Fig. 42. In Ficu, Nucis, Vitice, Rosa & Salice. Moro & Salice.

ebidi parisergemma 44, à radicis cylindro A erumpens, n lupleri latorum fo-

O fit in avellanis & quercu 45; in qua multiplices folio-
squamarum instar, quasi ovale corpus excitantes, proc
tus, ab annonculo furculo B, supra delapsi solu cicatricem C erum

sese contingentes, stà ut pineale fiat corpus. A singulo fo

solium stabile A pendet, & bu

Fig. 51. In fici 5 e exteriis utplurimum mu

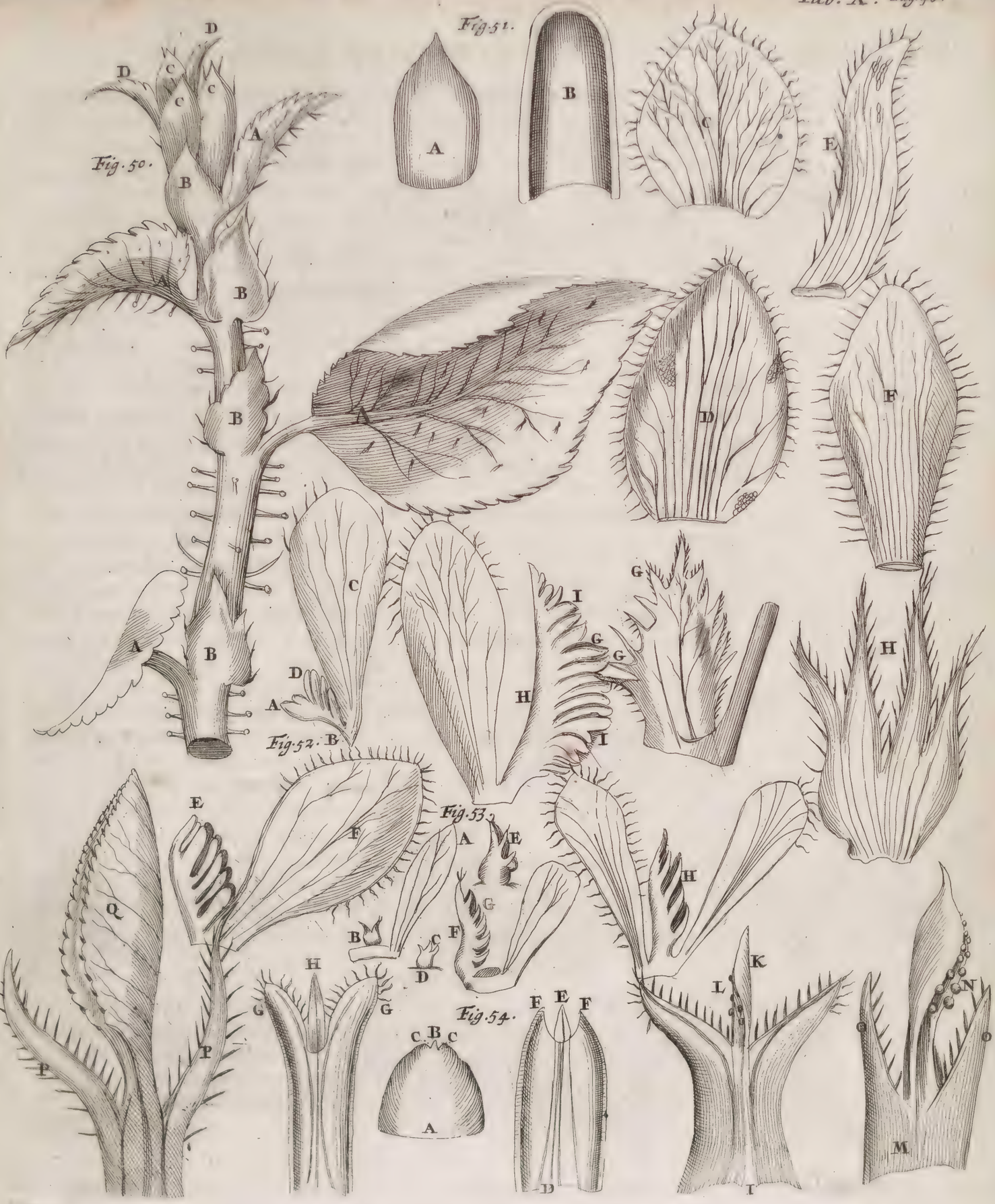


Fig. 50.
Fig. 51.
Fig. 52.
Fig. 53.
Fig. 54.

[illegible] produ[illegible]tionibus [illegible] pendices *G* ita gra[illegible] [illegible] surgit caducum folium [illegible] quasi scinditur foliola *H*, quæ tandem ta-

[illegible] marum flabri-

[illegible] mordus apertum & di- In Fœ

[illegible] gemmas aperiunt partes.

E videntibus in *robore* & *quercu* contingu[illegible]ac omnia; etenim stabilis hujus folii Ir
spe[illegible]s 53 tam parva est, ut vix microscopio d[illegible]prehendi possit. Inter caduca nam- Q
que foliola *A* inchoamentum folii assurgit, quo[illegible]ante collulâ *B* excitatur cum ge-

[illegible] & pe[illegible]remo,

[illegible] folium, cujus latitudo *H* crispa adhuc redditur.

[illegible] basim ipsius componant, mitrali amissâ figurâ, novis [illegible]
[illegible] in stabilia evadunt folia, q[illegible]

& primò in *lauro*, & per[illegible] [illegible] tralique constans formâ *A*, appe[illegible] [illegible] Idem folium auctius redditum *D*, & parùm con[illegible] [illegible] [illegible]t, quarum media *E*, complicari & convol[illegible] [illegible] verò *F*, caduci fo[illegible] [illegible] appendices *G* au-

bus fibrosis costulis, & papillis unguem ornantibus

decoratur.

Cotyledonis incrementa vegetantis puncta

bitâ acquisitâ formâ *H*, caduca foliola *I* contabescunt.

nitate meatus *F* soluta, auctiora reddunter; tandem

contabescunt foliola *H*: Horum forma varia est; frequ

biformes fovitur appendices *I*, & rotundis globulis

Cotyledonis maioris

D, *E*, *F*; in quibus caduca folia

papillis, terebinthinam

dunt

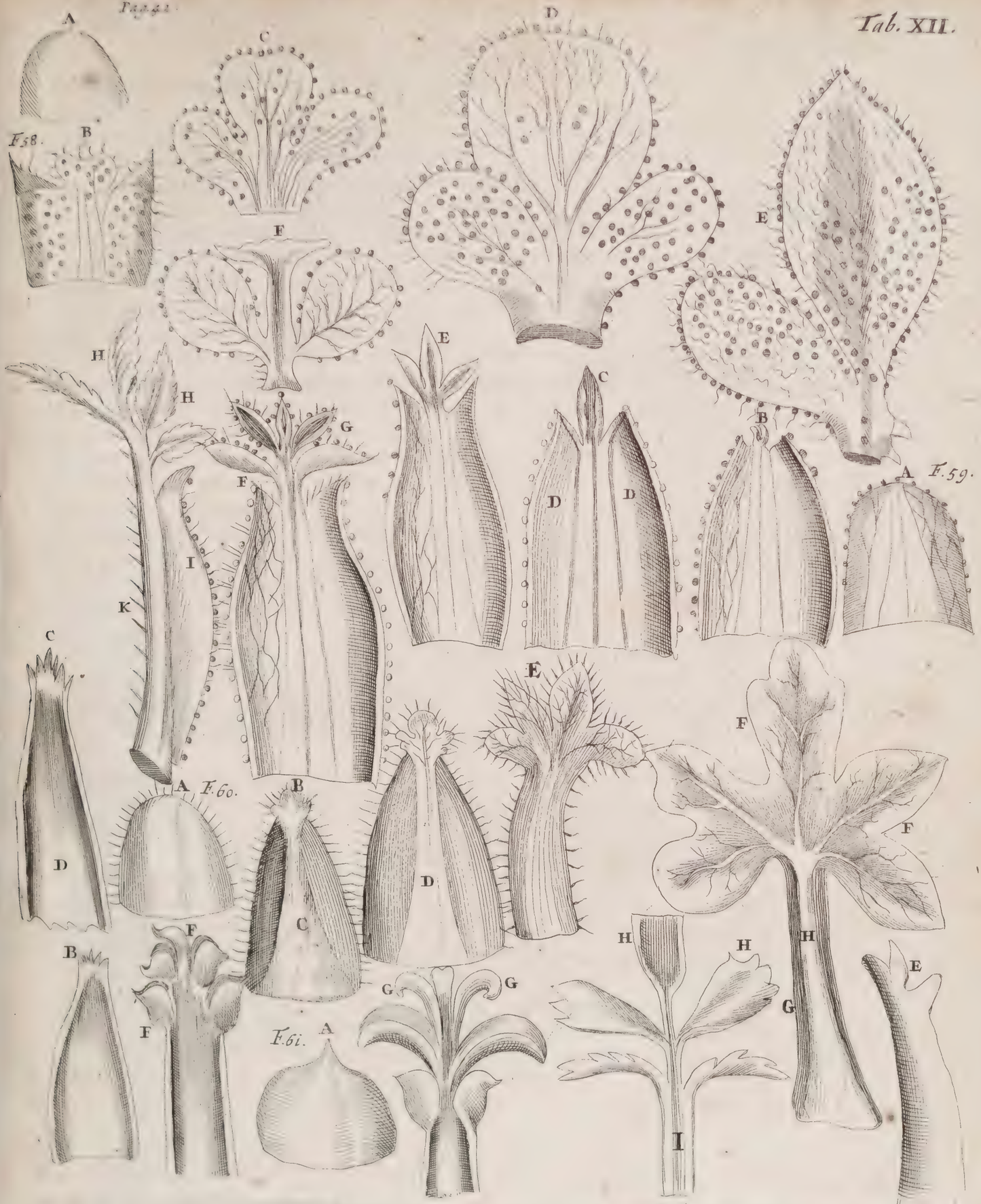
posteriorem distinctis foliis *H*, geminæ appendices *I*, graciles valde, hi

dioso *K* adstant, utriculis & pu

li carum folia, quæ tamen

Tab. XI.

Tab. XII.



[illegible] sciunt.

[illegible] A

tur, in stabilis foli pediolum abiumitur & immutatur.

[illegible] In Opio.

pur pediolus G, collulâ H per longum excurrente.

[illegible]

[illegible] Tab. 1.

[illegible] Fig. 1.

[illegible] Fig. 2.

[illegible] Fig. 3.

[illegible] Fig. 4.

[illegible] Fig. 5.

[illegible] Fig. 6.

[illegible] Fig. 7.

[illegible] Fig. 8.

[illegible] Fig. 9.

[illegible] Fig. 10.

[illegible] Fig. 11.

[illegible] Fig. 12.

[illegible] Fig. 13.

[illegible] Fig.

manifestantur, & folii pediolus E concavus & latus fuxurat

narum

Tab. 66. fig. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40.

Fig. 62.
F. 63.
Fig. 64.
F. 65.
F. 66.
F. 67.
F 68
F. 70.
F. 69.

Fig. 71
Fig. 72
Fig. 73
Fig. 74
Fig. 75
Fig. 76

pariter folium F, [illegible] involucrum D custodiat, eandem suarum partium revolu- [illegible]ritis,
[illegible] partium, simulque folium suo loculo circumdatum supra collitam custodit;
& [illegible]me ad miranda Naturæ ludit.

In *beta* 70, gemmæ multiplicibus foliolis conglomerantur; [illegible]la verò, exte- [illegible]
riora versus, gemmas sui partes A complicatas & reflexas ha[illegible]ctum tuen-
[illegible]im à minori folio B consimili contortum ut

Apio & ranunculo, 71 gemmarum folia sese [illegible]t, & custodiant, Tab. X. Fig. 71. In Apio & Ranunculo.
A [illegible]ce A folium B exterius erumpit, quod si[illegible]ad folium
C parium ambit; ab hoc sensim auctum sese ex[illegible]nus folium D, quod reflexum
[illegible] A [illegible] n folium E fovetur,
[illegible] ulterius aliud, non dispari ritu, e[illegible]

In *fœniculo* 72, analoga foliorum li[illegible] foli exor- Fig. 72. In Fœniculo.
tum A, gemma B seu plura foliola invicem conglobata c[illegible]ntur; lacerato etenim
[illegible]bulo folium C comatum extrahitur, cujus ped[illegible]os D, interiora versùs
[illegible]lum custodit, quod extractum hg[illegible] E servat, intra cujus
[illegible]

[illegible] & præc[illegible], [illegible] C[illegible]
sed & dorsum coopertantur. Ita in *vite* præ cæteris lux[illegible]oblongi & crispi, & cera pilo-
à caudicis solius erumpe[illegible]ris, & præcrtim
in *farfara*, ex filam[illegible]ti etiam foli la-
titudinem ità coope[illegible], ut super[illegible]. Cæterum Folo-
[illegible]

A[illegible], fu[illegible] & *pe*[illegible], [illegible]
[illegible] humore turgidi. Hi totam foliorum periph[illegible] Globuli extrahitur humore turgidi.
cooperunt. Variâ constant formâ C, & pedio[illegible]na spina fungi pariter ad-
sunt rotundo capitulo D, gracili assurgente[illegible]. In *cydonia* pariter *malo* co- In C Mali.
p[illegible]a sunt vascula F, à quibus terebinthina G extrahitur. In *cast*[illegible]s huius urnula H
[illegible], glutinoso rete ea
[illegible] & [illegible]mper in quo
[illegible]
[illegible], &
[illegible]
[illegible]
ex plut nosus &
[illegible]

Consideratis gemmarum foliolis, reliquisque ab ipsis erum[illegible]
media & profunda substantia, carnæ assar[illegible]a qua hunc inde
[illegible]e illam est lignum, suo ce[illegible]
medullaribus excitatum & [illegible]dens comprehendit pris[illegible]
tenellus furculus cum futuros[illegible]caudam[illegible]
sum

Hoc [illegible]

[illegible] medullæ *A*, quæ [illegible] *B* circumambitur; hanc succedit cortex *C* [illegible] lignosis fibris, qui in gemmæ foliola *D* laciniatur.

[illegible] cum [illegible] longè ab hac [illegible] cem [illegible] gemmam conclusâ, rudimenta *D* emergunt [illegible] bilia *E* quoque locantur. Ad hanc exaratæ gemmæ [illegible] vatur, ad [illegible] has ambit de [illegible] fovent.

Plantarum [illegible] pullulis, [illegible] augetur in speciem [illegible] elongatur, [illegible] dantur.

Hujusmodi incrementa [illegible] arboribus, & [illegible] quos, [illegible] loribus [illegible] pir, [illegible] & [illegible] que furculi medullarem [illegible] vel aphius apicem [illegible]

Generis stirpis conglomeratio novis particulis.

Executa Naturæ [illegible] num ordinibus eâdem ferè, vel saltem analogâ, methodo, [illegible] cedere videtur. *Animatum perfectorum* structuram ab ovo emergentem continuâ auctione, & [illegible] nem deinde, conglomeratis novis particulis prioribus & jam præexistentibus, ea tandem ratione, ut [illegible] quodcunque [illegible] in primæva [illegible] & naturam [illegible] nua; In *insectis* autem, ultra augmentum, diversis dicam ætatibus partes, quarum rudia delineamenta in juventute latitabant, emergunt, qualia [illegible] & simil. In *Plantis*, eadem [illegible] mentum, tronco & ramis supercrescente ligno [illegible] singulo anno erumpunt furculi, quorum a [illegible] um inchoatum [illegible] fœtus [illegible] *gemma*, [illegible] vegetantium generibus, eamque tenello & [illegible] squamatim locata erumpunt, integram vidim [illegible] choatum *fœtum*, furculum ità custodium, ut [illegible] pore adolescat, [illegible] dantur, & nova progerminet. Et sicut in *Ovata* partium [illegible] adhuc fluida, furculis contenta diu jacent, donec intercedente [illegible] quasi compendio quodam, insint; & per annum [illegible] lantur, donec, accedente vere, [illegible] furculi speciem ext[illegible] Quæ folia, quæ perfecto furculo [illegible] generarit formam, ut fusè percurrendo gemmarum augmenta [illegible]

Quæ

[illegible] enim ex [illegible] & [illegible] [illegible] [illegible]

Continuata anteriora fermentatio mediis radiis

Intestina fermentatio, continuata ferè p[illegible] fium promovet exclusionem; quæ vel arreolis expositis effluia crassiuscula naturam sapiunt, vel aqueæ subsitant, modum æmulantia propriis succis detinentur, tandémque vanescendo obliterantur, quin & succus, q[illegible] & *spacio*, circa ipsa densatus, ex perpetuo effluvio probabile est. Idem [illegible], deficiente contento olim humore, exsiccati conten[illegible]

DE FOLIIS

Folia digitata

Tam variè configurantur folia in singulis vegetantibus

Fig. 77.

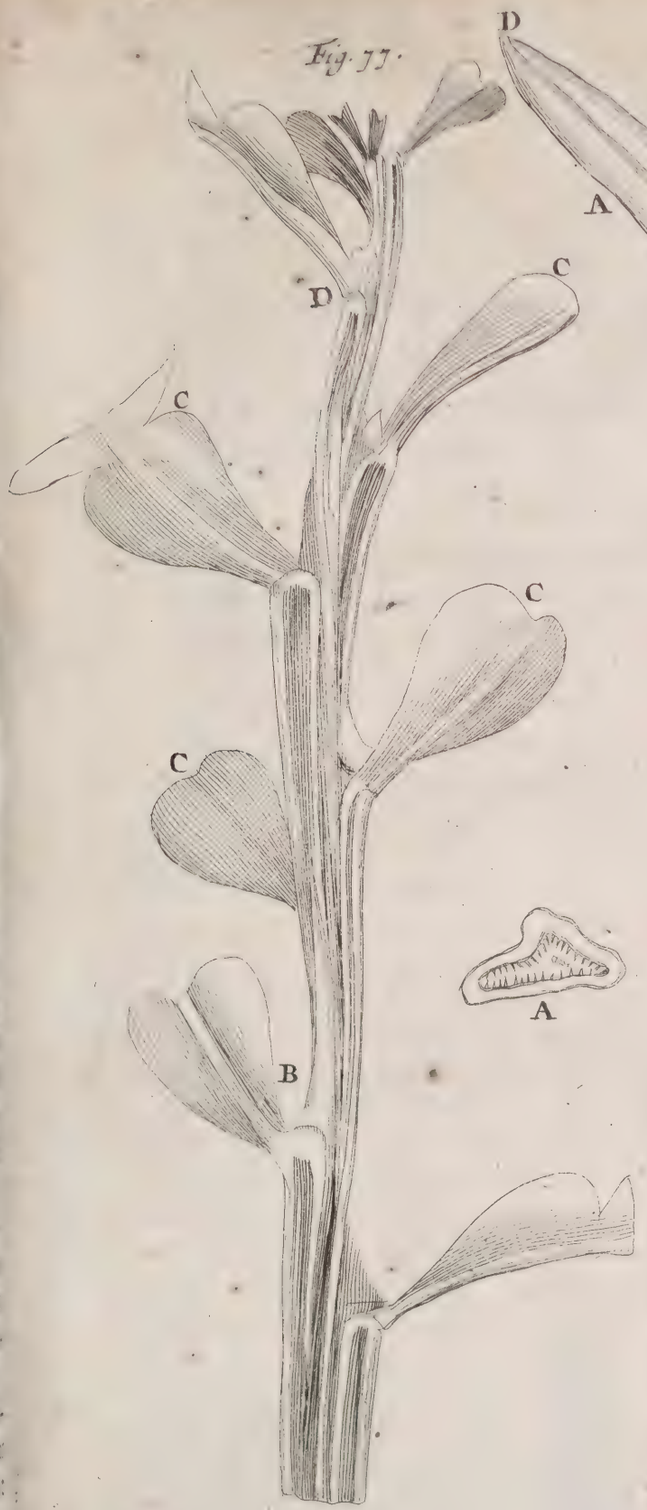


Fig. 80.

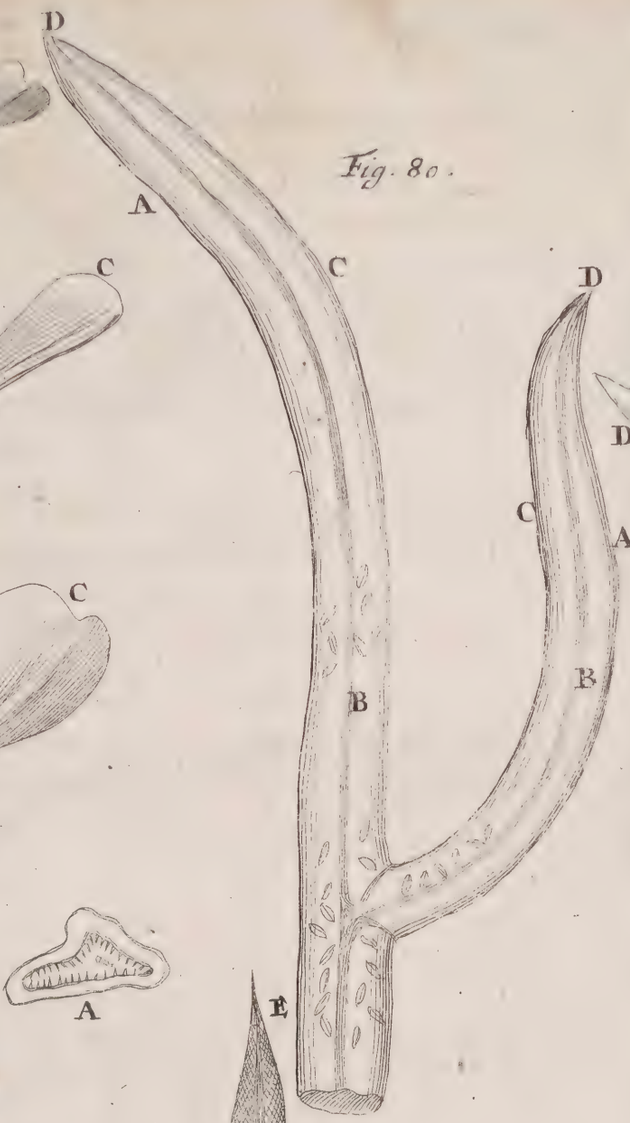


Fig. 79.

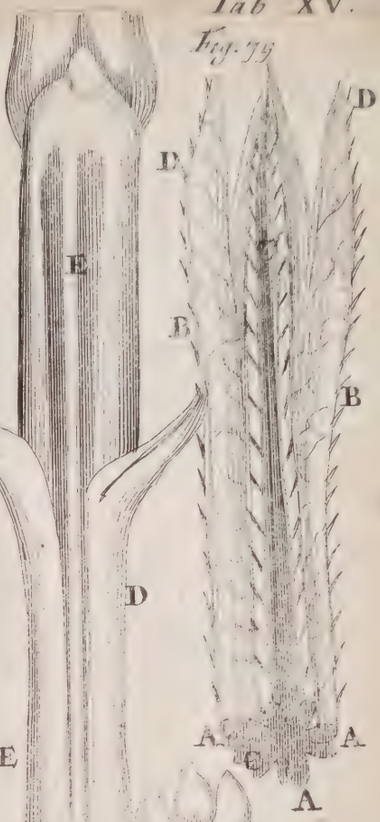


Fig. 78.

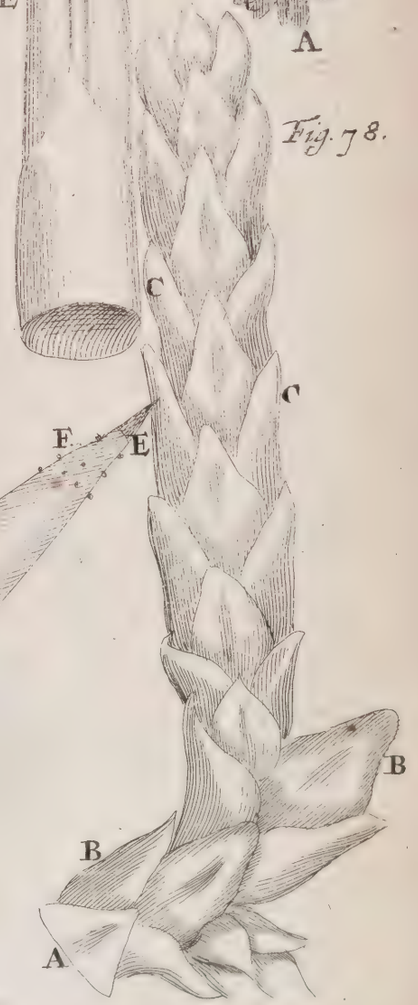


Fig. 81.

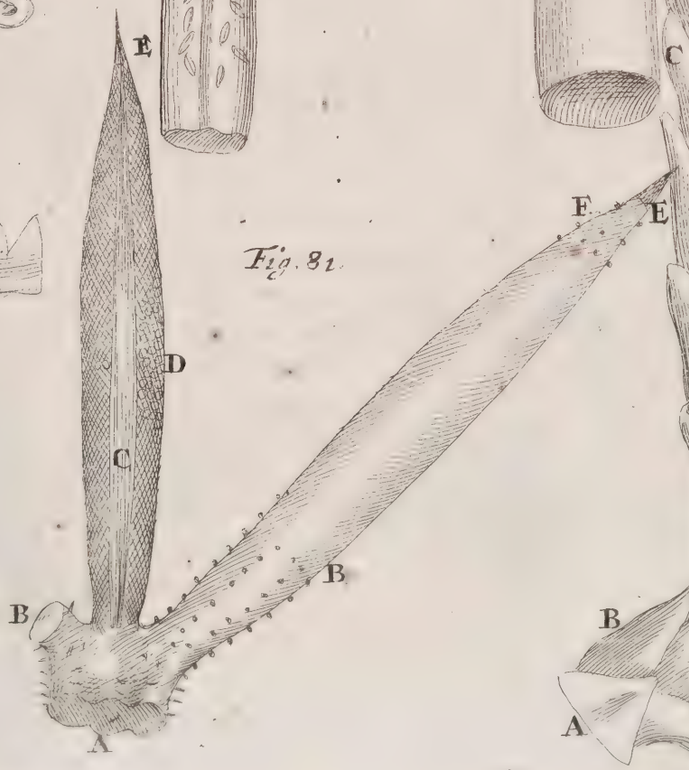


Fig. 83.

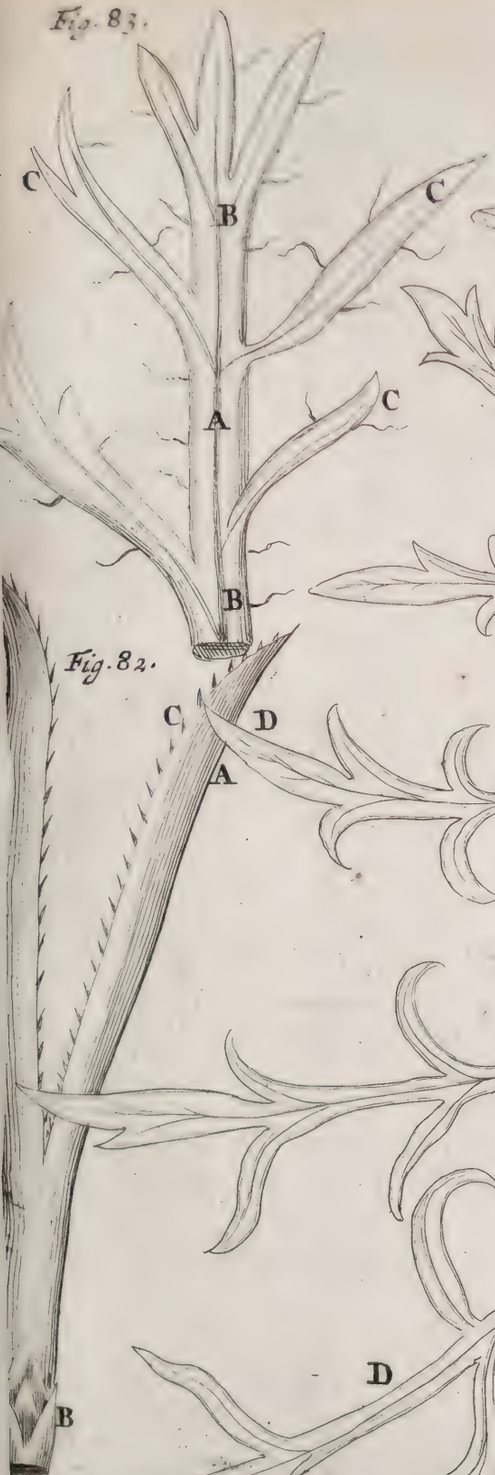


Fig. 82.

Fig. 84.

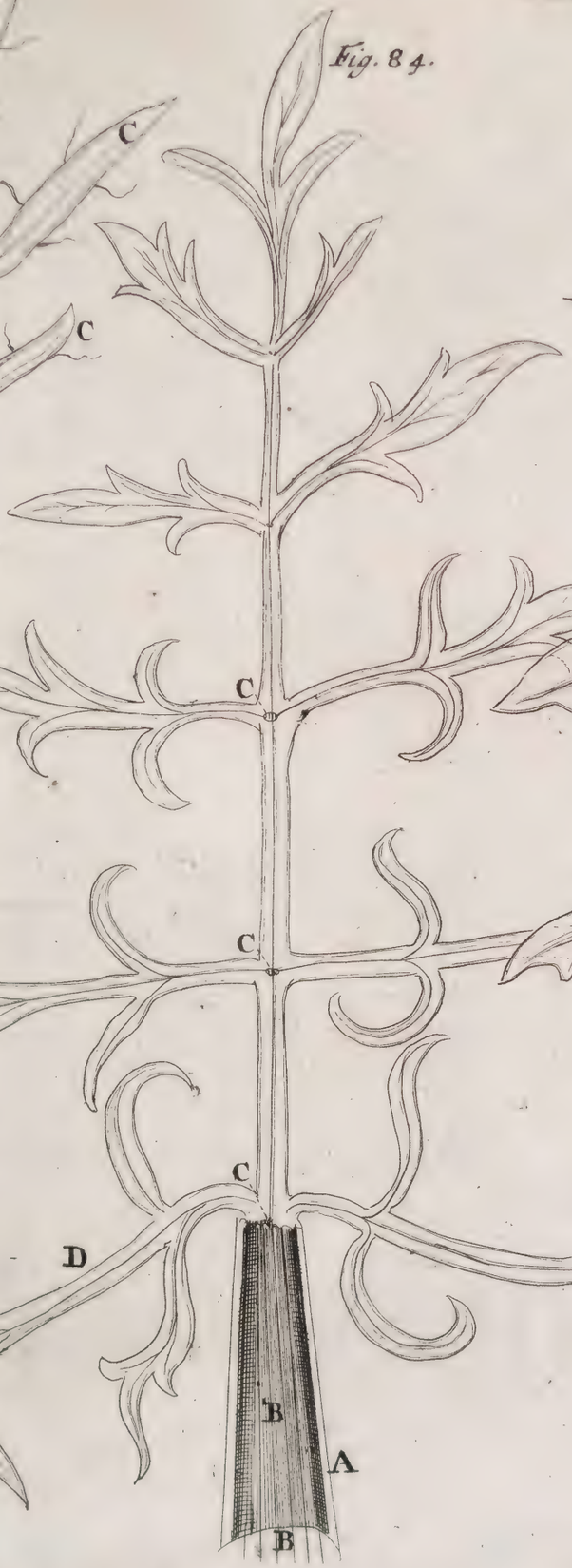


Fig. 85.

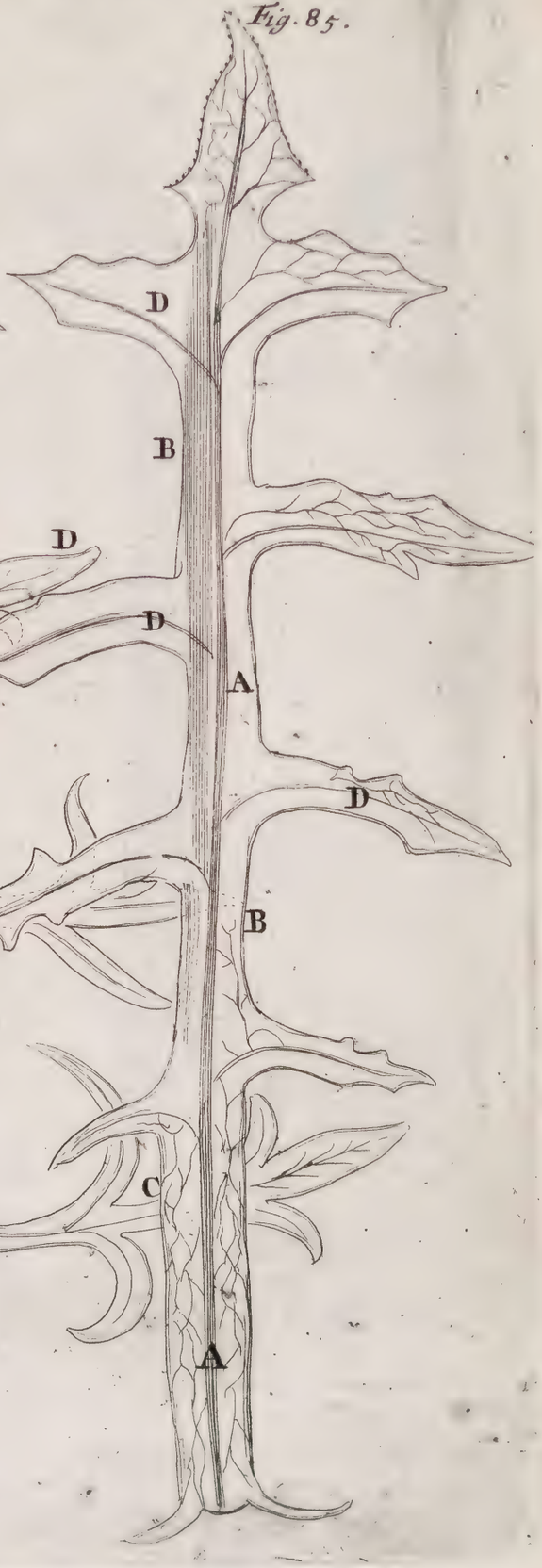
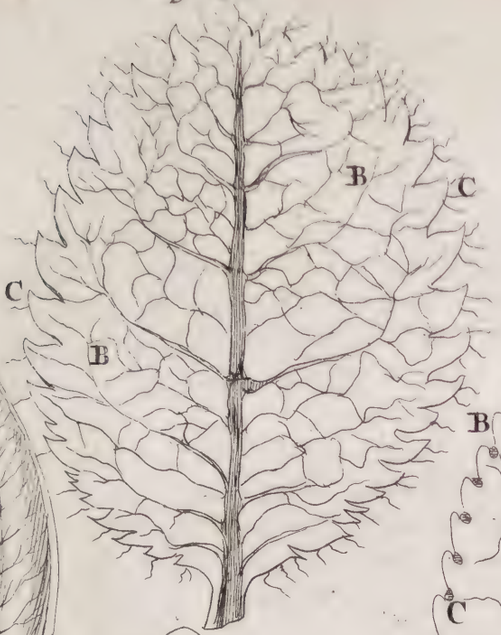


Fig. 87.



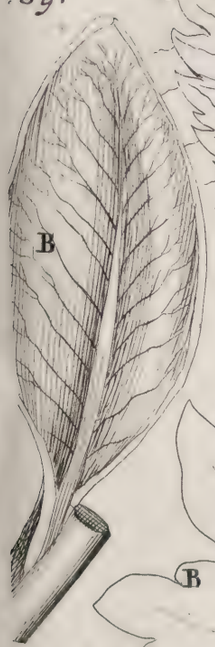


Fig. 86.

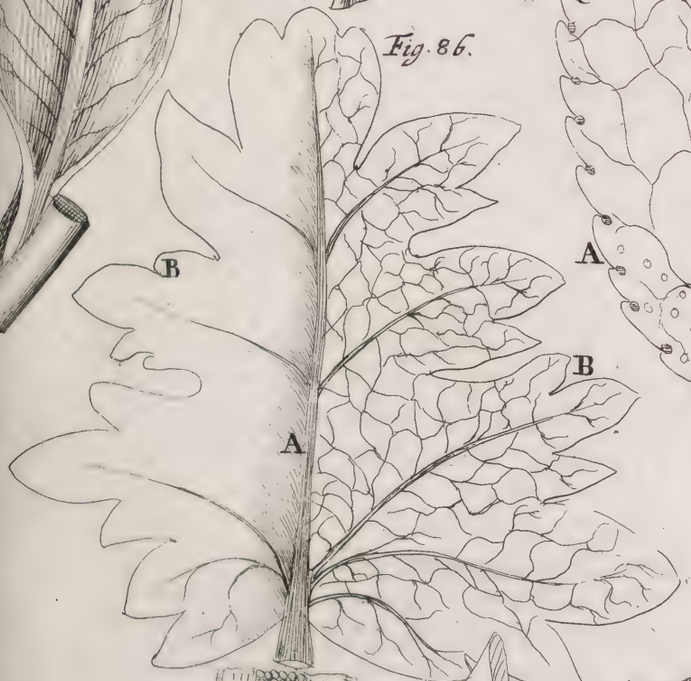
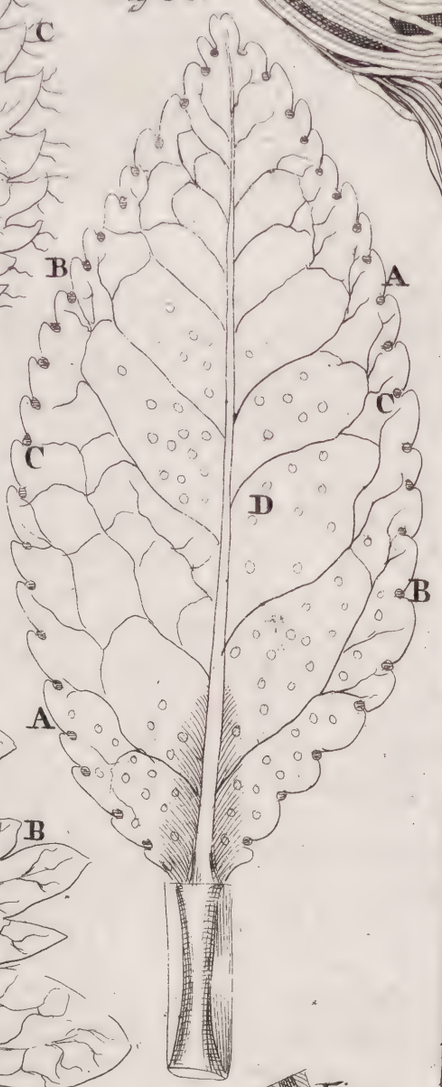


Fig. 88.



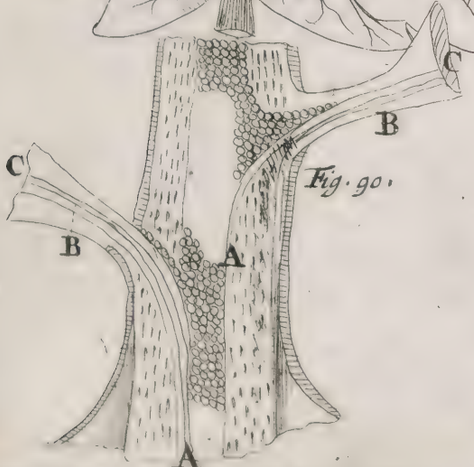


Fig. 90.

Fig. 93.

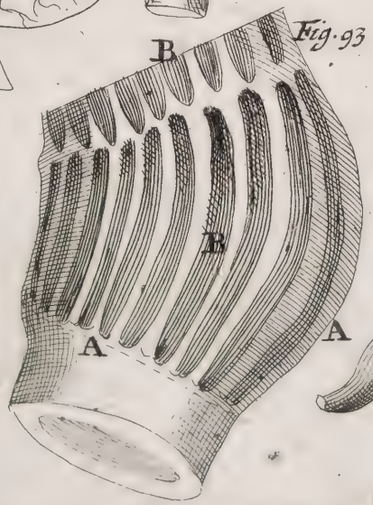
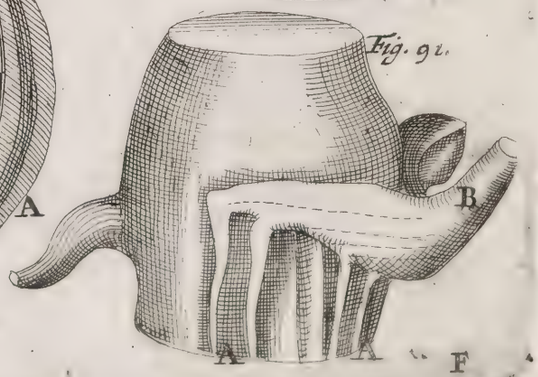


Fig. 91.



...ram, à ramo enim *A* erumpunt folia *B* crassa & viridia latiori exor...

...stantia parti... ...& ... *D* ..., & ... *D* ..., & ... Quæ ...

... appendix, excurrente furculo; ... quatuor ... spinis *D* mununtur.

Fig. 80. Conspicuus in cauda equina.

... *C*, ... ramulos ... *A* ... folium ... Fig. 80. Lentiscus.

... *B*, ... *D* ... *A* ... excurrit, ... *C* ... cylindricum corpus efficit, quod in stylum seu spinam *D* desinit.

Fig. 81. In *A* simpl.

... *A*, ... *B* ... *C*, ... *D* ... *A* ... armatur, reliquum verò papillis *F* ornatur.

Tab. XVI. Fig. 81.

... *A*, ... *A* ... *B*, ... *C* ... *D* ...

... *A*, ... *A* ... *B* ... *C* ... *D* ... progressum mirantur in *abjynthio*.

E. In Abrotano, Fig. 82.

... *A* ... *B*, ... *C* ... *D* ...

Fig. 83. & sequ.

... *A* ... *B* ... *C* ... *D* ...

Tab. XVII. Fig. 84. & sequ.

... *A* ... *B*. In *pinis*, *pomis*, & pehè ... numeris, ità continua redduntur ... mirantur tantum superesse ... culæ.

Fig. 85. & sequ. In Aconito.

... *A* ... *B* ... *A* ... exasperatur, ...

Fig. 88. In malo medica & limone.

In *mali medica* & *limone* 88 foliis, minimarum crenarum vestigia supersunt; exterior namque unguis *A* Zonâ qua... hanâ ambitur, & frequentem patitur inci-

surarum

Fig. 94.

Fig. 97.

Fig. 96.

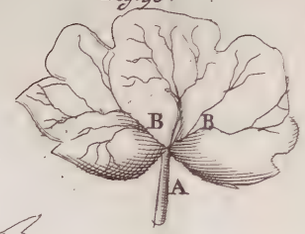


Fig. 95.

Fig. 98.

Fig. 99.

Fig. 100.

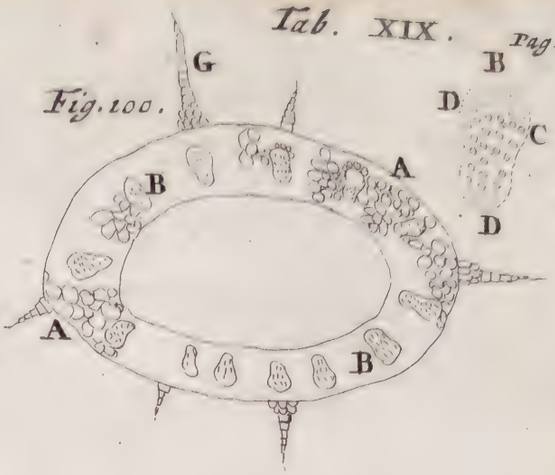


Fig. 102.

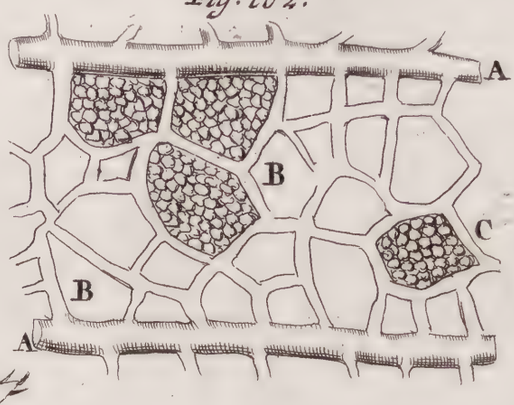


Fig. 101.

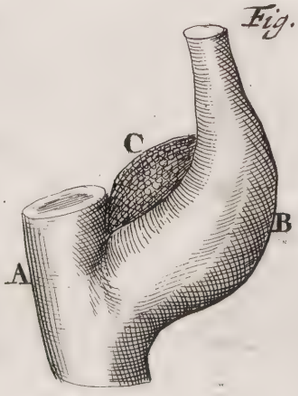


Fig. 103.

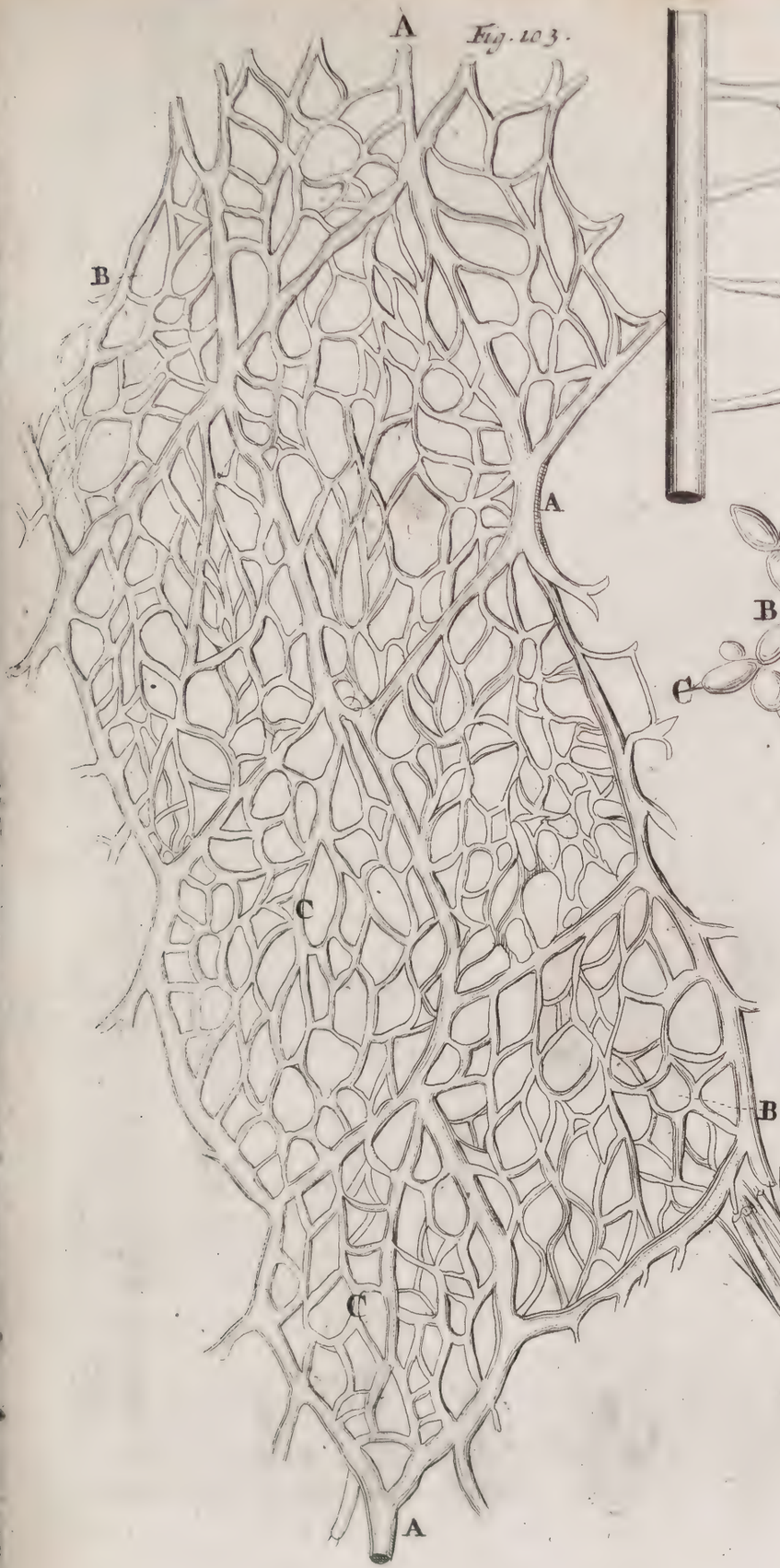


Fig. 106.

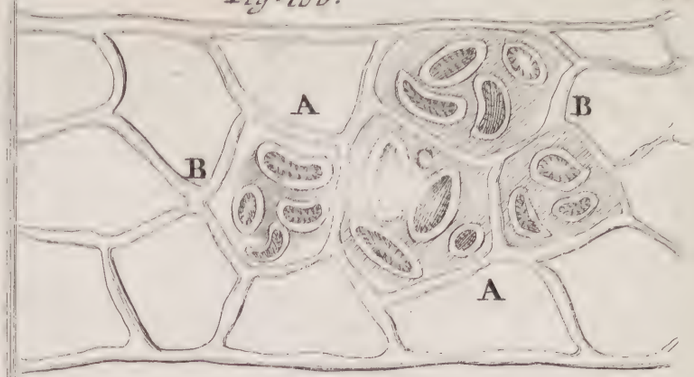


Fig. 105.

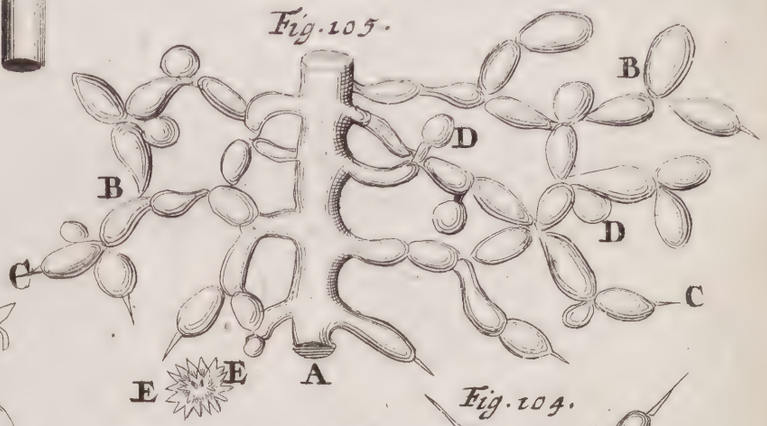
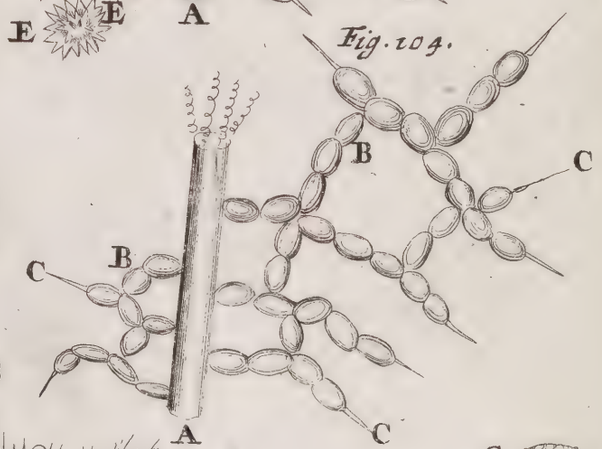
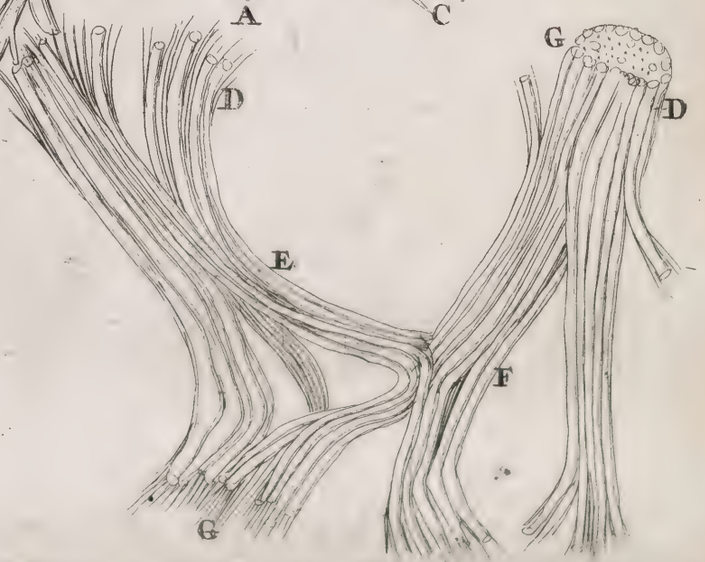


Fig. 104.





Fibulæ &

Fibulæ & tracheæ incomitantur peculiaria vasa, quæ cor

hæc sola humoris ex

scatent corporaturâ; unde fœtus fons *hydrops*

chelidonii, sublimeus humor, in reliquis autem herbarum & arborum

est, ideo nu

Horum cellulas reticulariter per totam la

ces subortas areas videmus; hæ autem utricu

cellulæ, & quasi ab ipsis pendentibus; un

licèt insigniu

fese offert, ut in *portulaca*, *bnxo*, *sempervivo*, & *telephio* 104: In hoc etenim,

reticulariter implicatæ rapiuntur, quibus tota tolli latitudo & crassitie

Sunt autem utriculi ovalis figu

in modum vesicæ laxatâ componuntur

cum bu

udinem sui centrum exeu

cerationc utriculi frequenter manifestantur.

crassiori *operatio* tolio

lorum ordo

rem modo, lacerationc p

& tabe consumpto, plurium

it quædam fi

Hæc fundioris fi

un peculia

cydoniorumque malorum pericarpio

vel laxitate, varias lubeunt i

vesiculæ co

Inter utriculos & fibrosum

ad- dispersa

biatu foras, vel habi

tolli di

brosis cellulis B ex

ducto labio,

cavo & globoso ex

locul

A fibra etenim insigniori *A* emergentes cellul

tubulis C ulcerus irrigantur, lusque

Fig. 107.

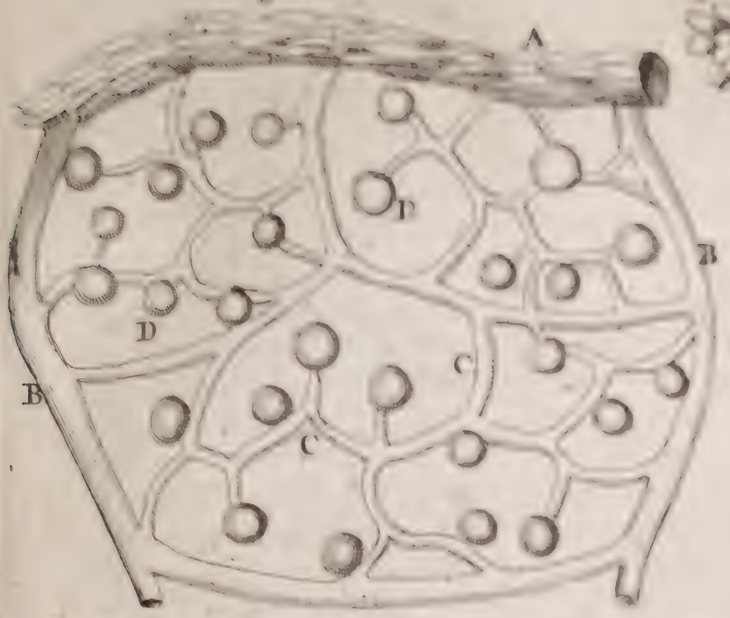


Fig. 108.

Fig. 109.

Fig. 110.

Fig. 111.

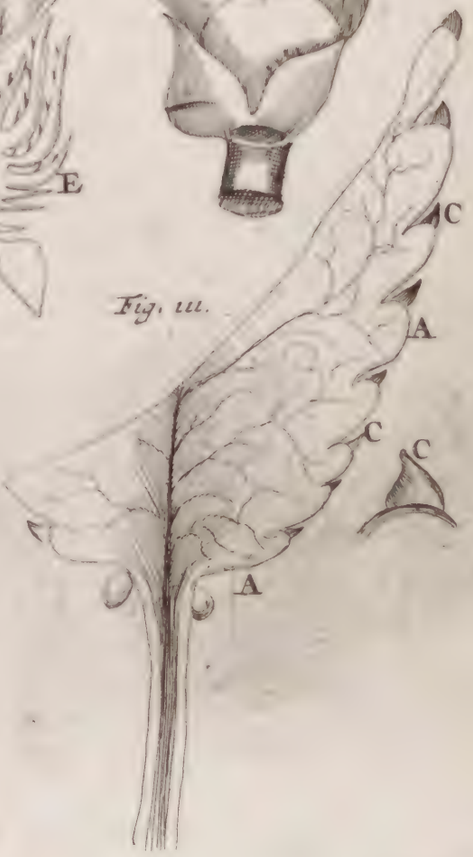


Fig. 112.

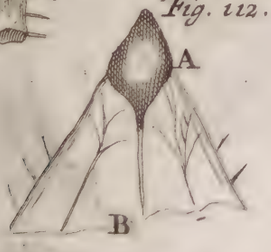


Fig. 113.

Fig. 114.

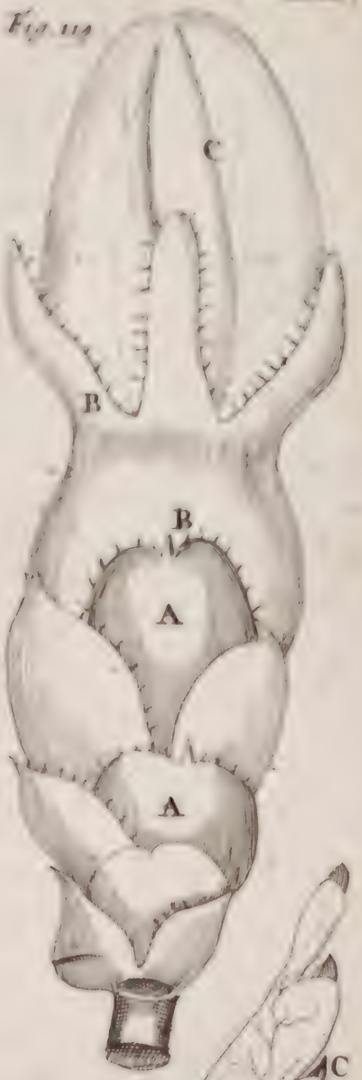


Fig. 115.

Fig. 116.

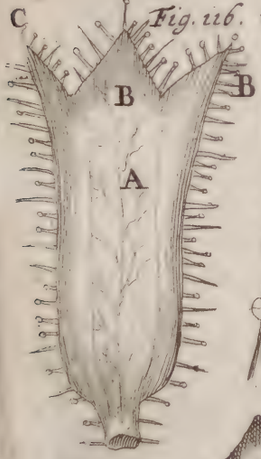
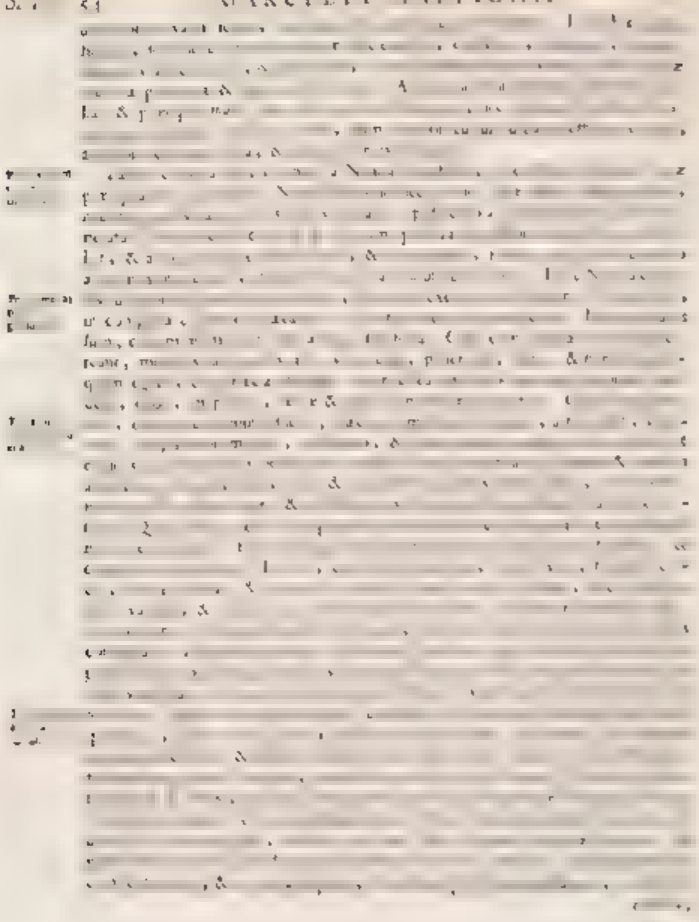


Fig. 117.

Fig. 118.

Fig. 119.



DE FLORIBUS

Plantas singulo quoque anno vel [illegible] Tunicas verò [illegible]

[illegible] tuæ [illegible] meo [illegible] calyce [illegible] rioribus, [illegible] bere [illegible] ræ, [illegible] cessit [illegible] A, [illegible] cingentem [illegible] Io [illegible] reliquos [illegible]

[illegible] & [illegible] antecedat & [illegible] & [illegible] & [illegible]

[illegible] plica distinguuntur foliola; ità in *bursa pastoris* quatuor exci[illegible]
frequentius tamen quinque numerantur;
[illegible] *boro nigro*, *cannabe*, *lino*, *exiacantha*, & *rosa*, quarum floribus nondum

[illegible] dinus, ità ut minora interne
[illegible] vatur foliola *B* viridia, quibus reliquum *C* munitu
[illegible]
quibusdam mutè plicare foliorum ordines;

& Cy- nibus digesta, squamarum instar sese cooperi
tinguli solùm species est *B*. Idem observatur in *chamæmelo*, &
ius calyx quatuor foliorum *B* ordinibus comp
cha paratur; Singulum calycis fo
ns instar lapidis. Non longè ab ambiente

Tab. XXII.

Fig. 119.

Fig. 120.

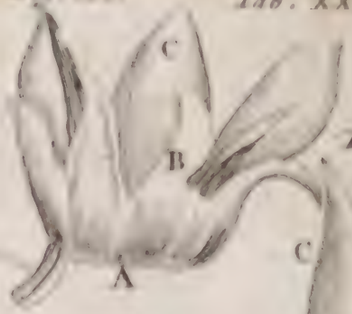
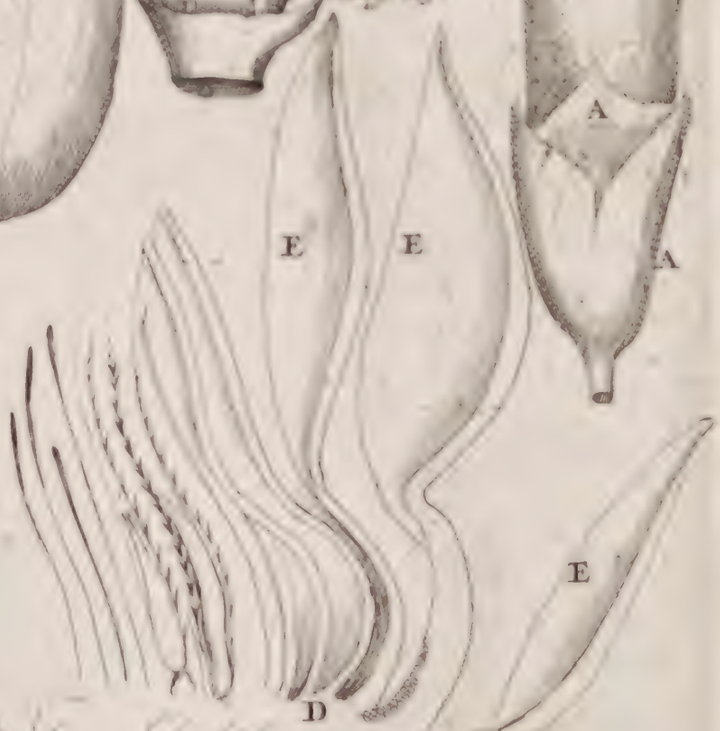


Fig. 124.

Fig. 125.

Fig. 123.



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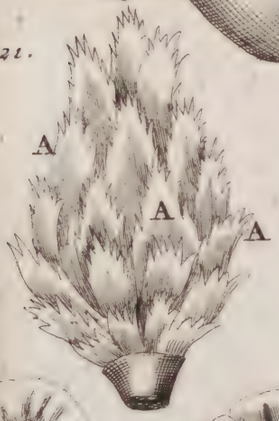

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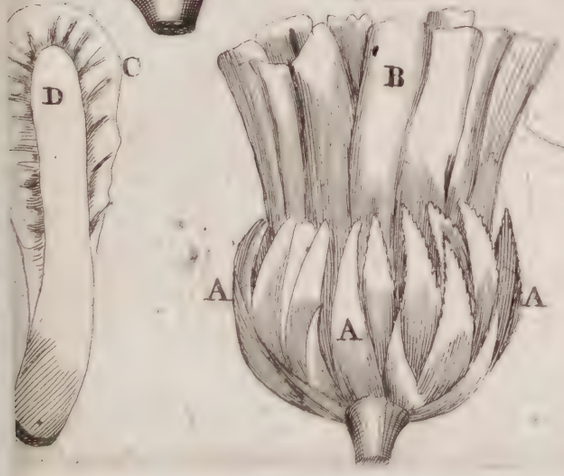


Fig. 116.

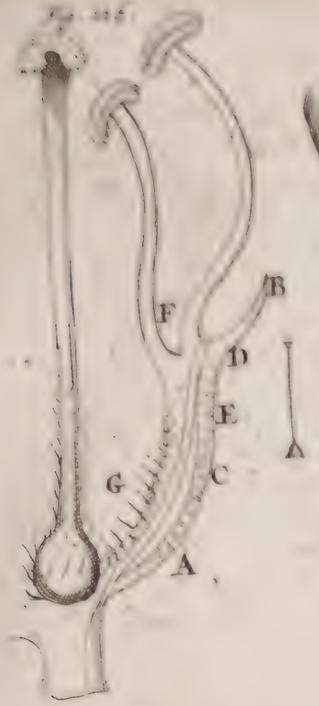


Fig. 117.

Fig. 119.

Fig. 118.

Fig. 132.

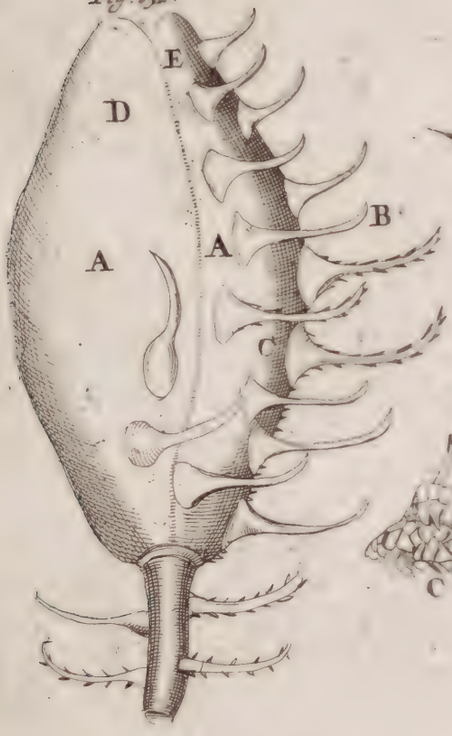


Fig. 130.

Fig. 131.

[illegible] nondum huiusce flore quam [illegible]

[illegible] & uticulis elegantèr contexta; nam ex- [illegible] Amygdalæ &c.

[illegible] portio interclli & grumula, &

[illegible] plum succi.

[illegible] Figura 20. & 21. K.

[illegible] interjecta folia elegantibus dita
[illegible]rium *A* elongatur, quod a lateribus appendic[illegible]

pavere patet [illegible]

[illegible] subintret &
vellis, foliorum apex ipsum attingat; in reliq[illegible]

Supra calycem à dilatato caule vel petiolo [illegible]
folia fcil. Tam variæ hæc configurantur, & col[illegible]

[illegible]næ mitat, tubulosum, à calyce *B* usque ad extremum [illegible]

[illegible]n, qui tubulosus & p[illegible]
q[illegible]ilat corpore, hu[illegible]
[illegible], &
[illegible] 136,
[illegible]consistant formâ *A*, crassa ex[illegible]
hujusmodi in extremo ungue in[illegible]
mina & stylus condantur. Ita[illegible]

Flosculorum petiolo, [illegible]
ntur foliola *A*, quæ
bugloss, & pru[illegible]
quod tubulosum
Natu[illegible]

Fig. 136.

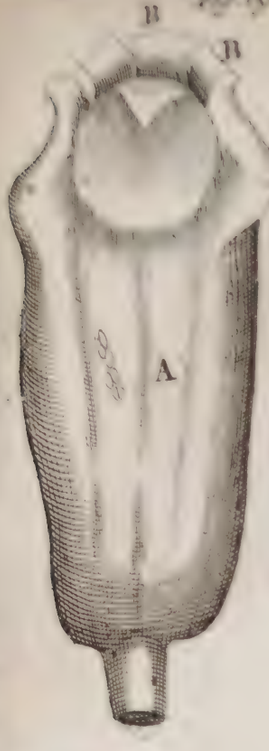


Fig. 139.

Fig. 139.

Fig. 140.

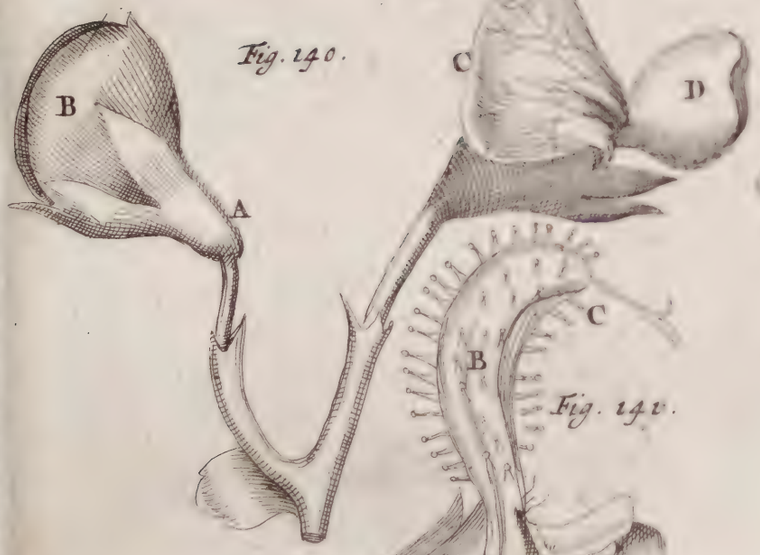


Fig. 141.

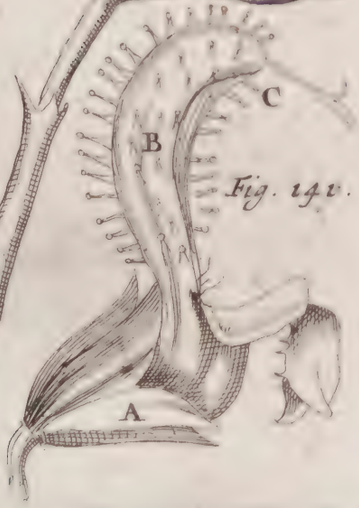


Fig. 137.

Fig. 135.

Fig. 138.

C

Fig. 142.

Fig. 143.

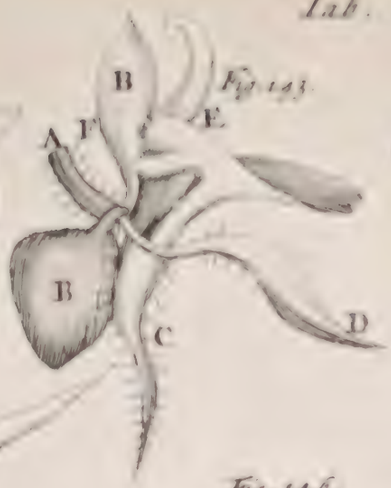


Fig. 144.

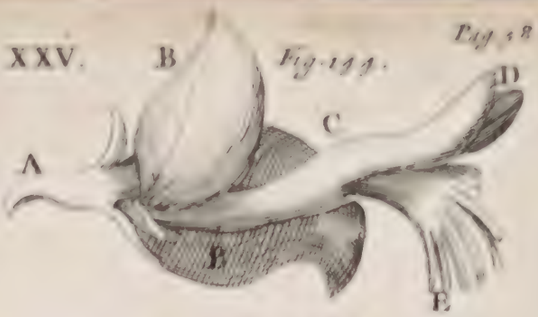


Fig. 147.

Fig. 146.

Fig. 145.

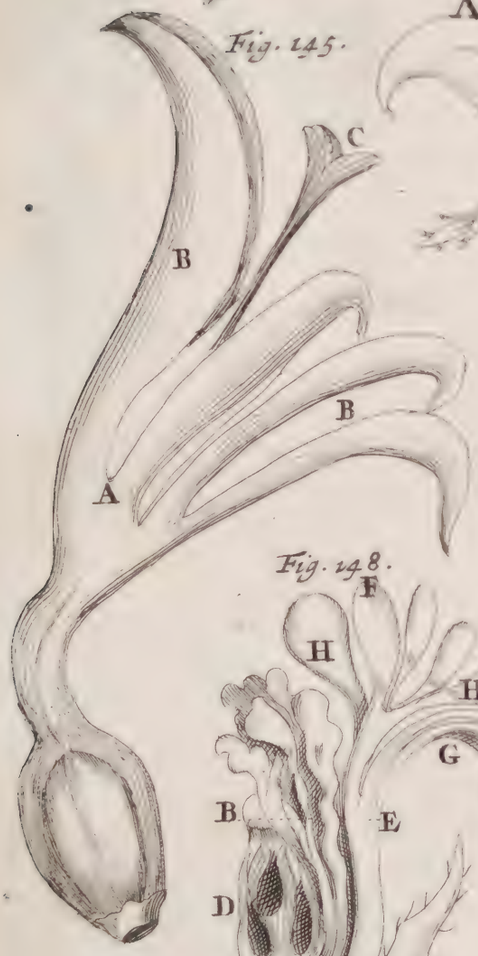
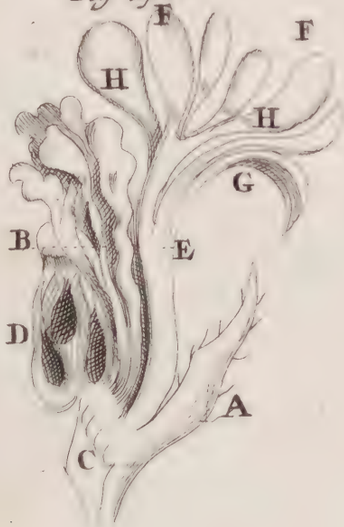


Fig. 147.

Fig. 148.



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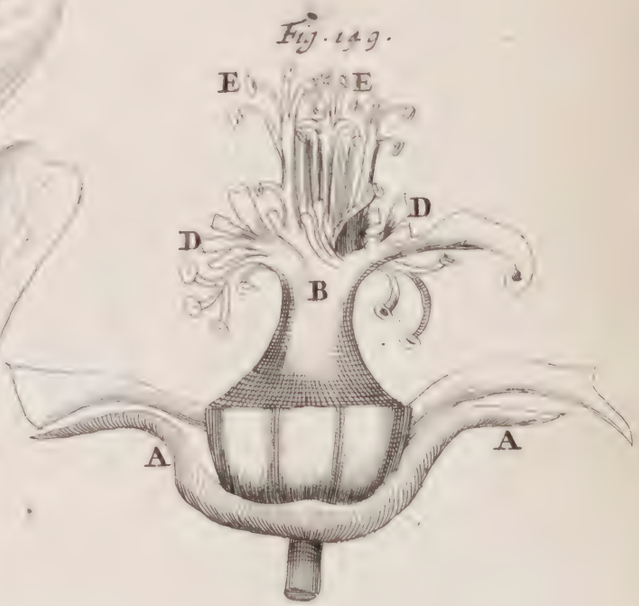

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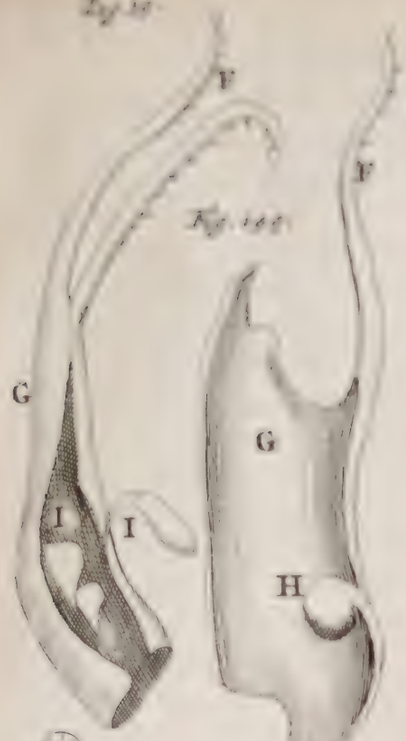


Fig. 150.

Fig. 151.

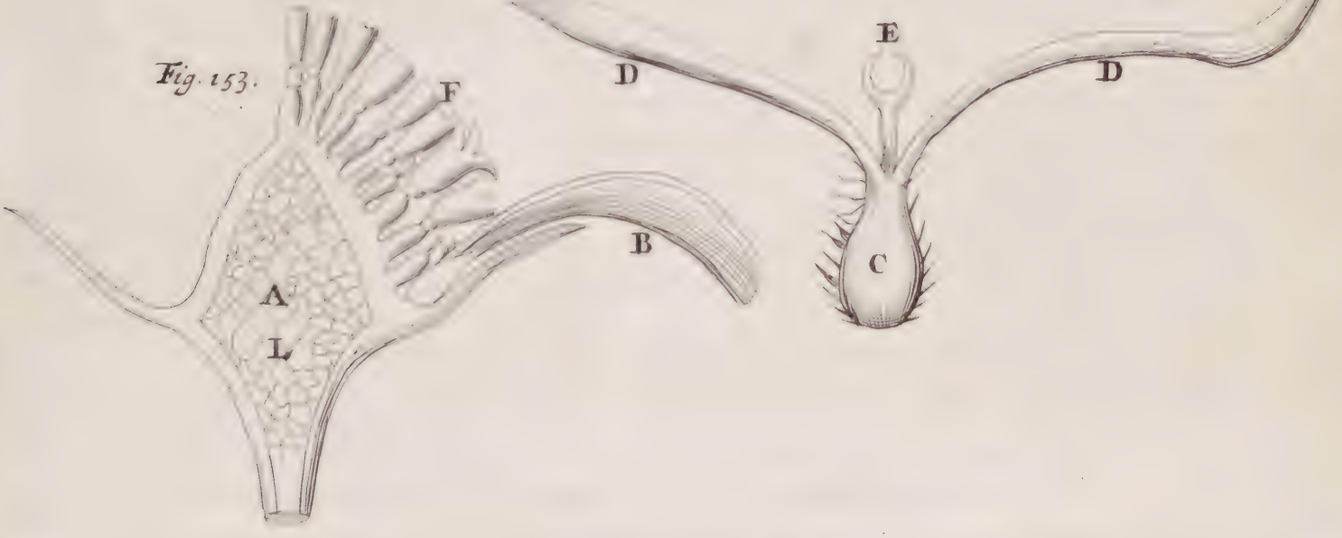
Fig. 152.

Fig. 151.

Fig. 151.

Fig. 153.

Fig. 153.



excitatur. In hoc & ramulus nullum habuerim flyi, quo vestigium extat. In vitis flore

H 2

bus. condecoratur; ita ut exarata sona [illegible] eodem furculo A, tami ej[illegible] cum flosculis promuntur, quorum e[illegible] flos plenus excitatu[illegible]s fibratum productiones F in singula tonora inuicat.

Fabr. fig. Eadit rursus natura solitâ suâ munific[illegible]dum florem pluribus flosculi[illegible] ponit, ut jucundum spectac[illegible] depressius est, supra calycem primò in[illegible] & fluvium B, l[illegible], floris bulbo o[illegible] l[illegible] folium unicum D rotundo exortu c[illegible]; ab cujus medio, l[illegible] e[illegible] l[illegible]lus autem, flore pleno turgentibus, folia hujusm[illegible] gemina sunt, & crumpent[illegible]s tubis E locum præbent. I[illegible] flosculis F occupatur; singuli, [illegible]am loculo G & folio constante, quod in qu[illegible] I[illegible]rem subjecti co[illegible], [illegible] c[illegible]nt, qui dant [illegible] [illegible]n in *gyrum* præcipue [illegible] m B ambit, ab hac, coronæ instar, tubuloſa l[illegible] g[illegible] Reliquum aream tenent flosculi E, quorum bulbi F lemen cuti[illegible] pius G ornatur; ab hac fistulosum extend[illegible] fumum H, à cujus b[illegible], & fl[illegible]a crumpi[illegible] Eandem formam c[illegible] I[illegible]o 155, in quo canus, dilatatus in pericarpium A, utric[illegible] c[illegible]nem præbet.

O[illegible] D excitatur. Re[illegible] floralı tubâ, & staminibus H, [illegible] versâ & oppo[illegible] pericarpii moles ita amur[illegible] postea flosculis seu flytis [illegible] &[illegible] [illegible]neratio, stylos[illegible] Floris verò totius p[illegible] ta, quæ in *heliotropio* &[illegible]

[illegible] carpium A, [illegible] extremitas fi[illegible] [illegible] acta B, va[illegible] quorum l[illegible]

[illegible] hi sensim au[illegible] bulbis est *semi*[illegible] extendi tur[illegible] A,

Fig. 154.
D
C
C
I
A
E
H
H
C
B
Fig. 156.
C
B
B
C
A
A
Fig. 155.
G
F
G
F
Fig. 156.
F
G
D
E
F
E
E
Fig. 155.
A
B
Fig 155
C
D

Tab. XXVIII.

Fig. 157.
A
A
Fig. 158.
A
B
A
A
Fig. 159.
B
B
A
A
Fig. 160.
B
C
A
Fig. 161.
A
B
C
Fig. 162.
B
A
Fig. 163.
B
A
Fig. 164.
A
B
Fig. 165.
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Fig. 166.
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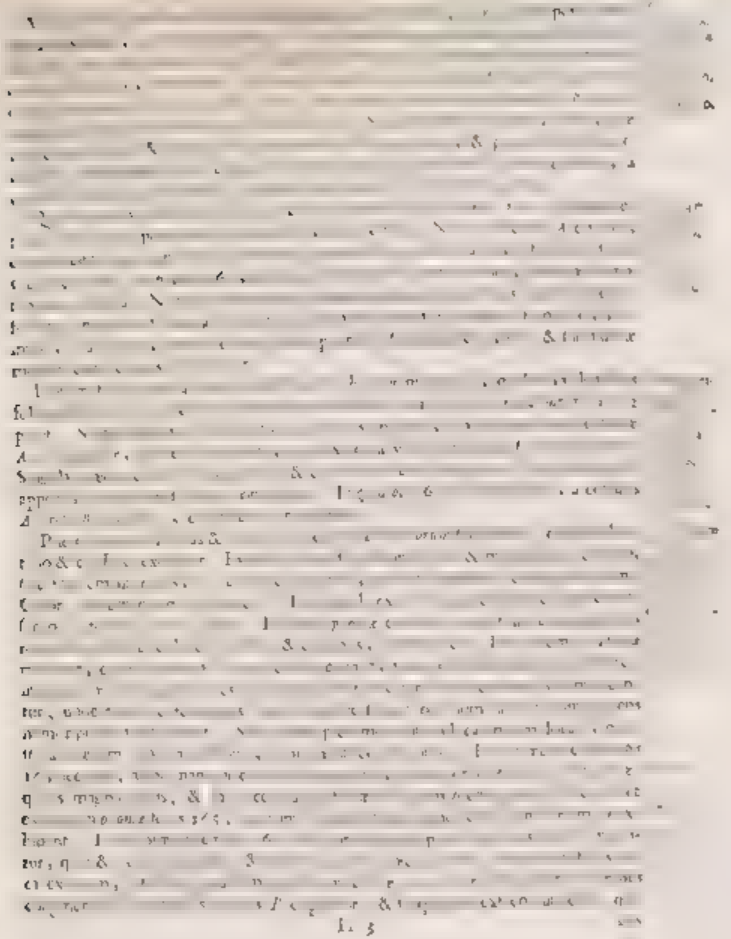
F
E
H



ter turgent, quod certe cop

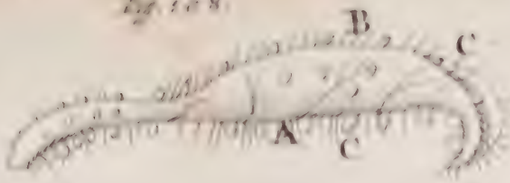
nchas in florum foliis exc

co 167. & tenuis

Tab. XXIX.

Fig. 167.

Fig. 168.



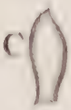


Fig. 169.

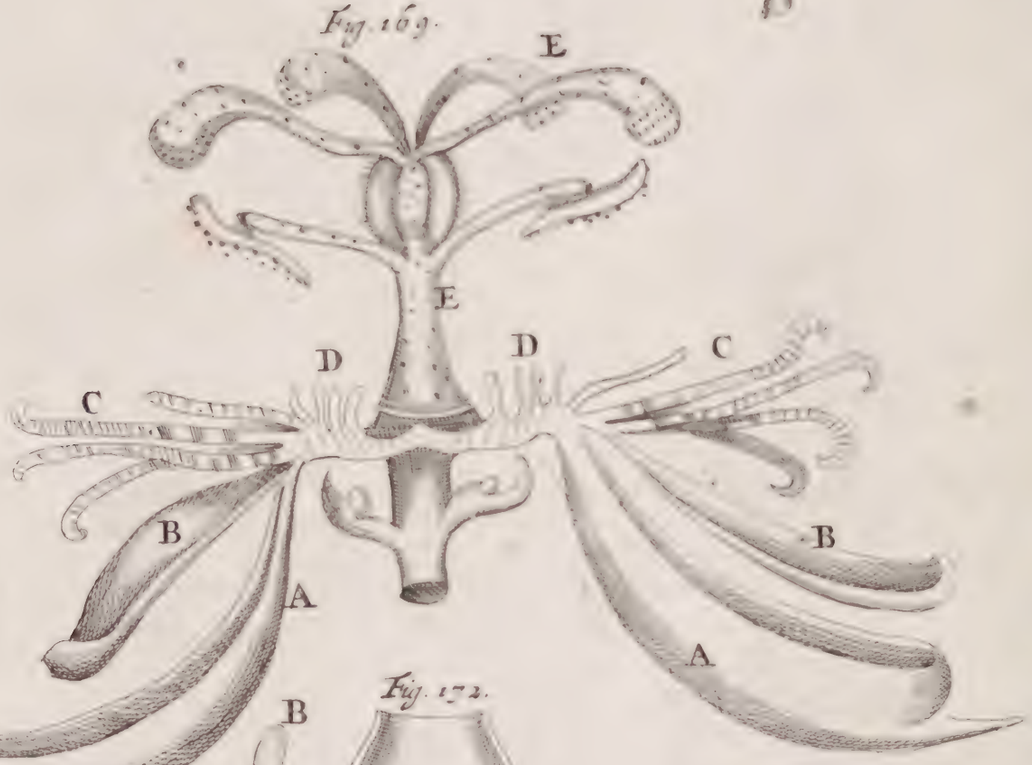


Fig. 170.

Fig. 174.

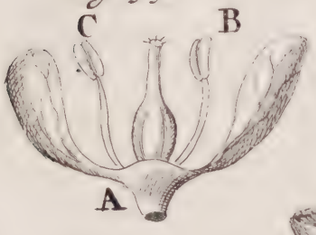


Fig. 172.

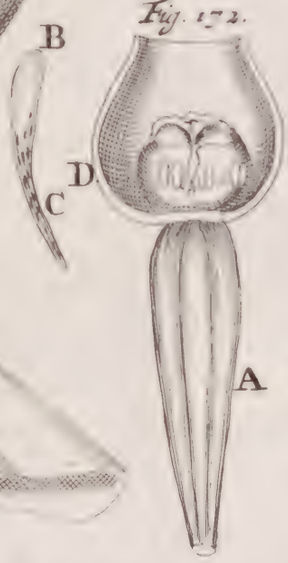
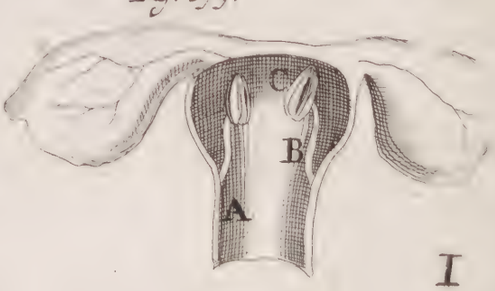


Fig. 171.

Fig. 173.



I

Fig. 176

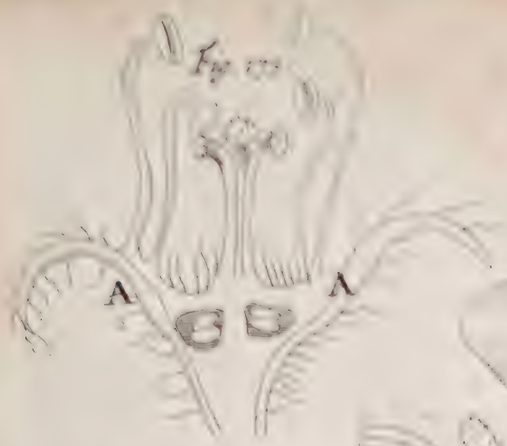


Fig. 176

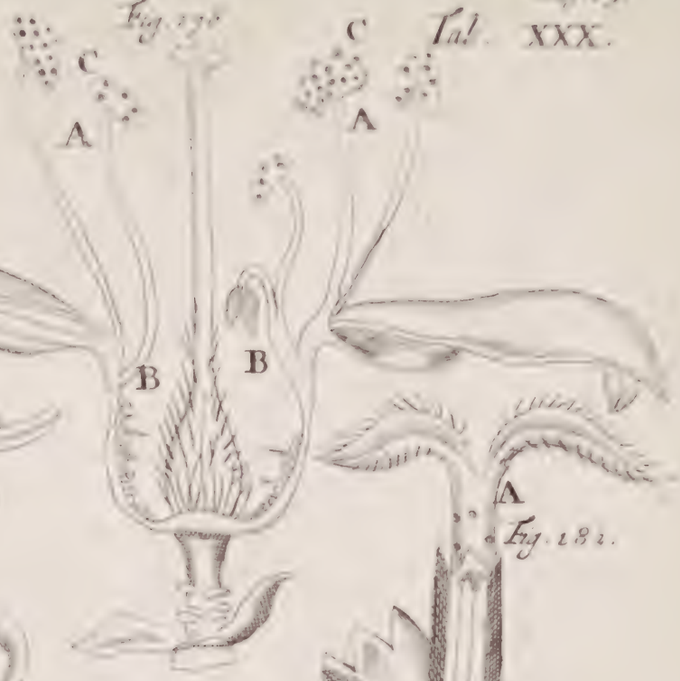


Fig. 177.

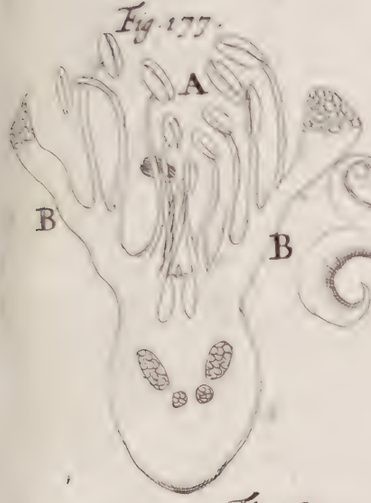


Fig. 178.

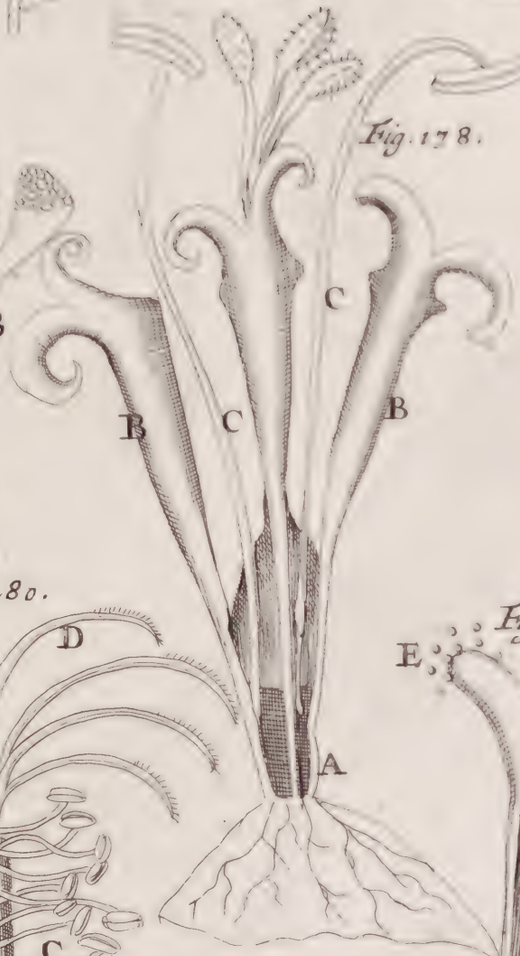
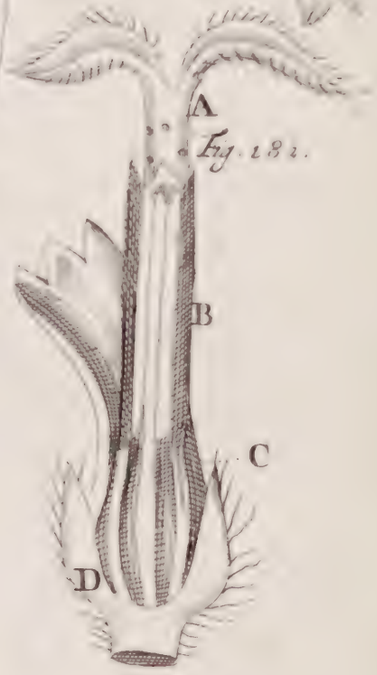


Fig. 181.



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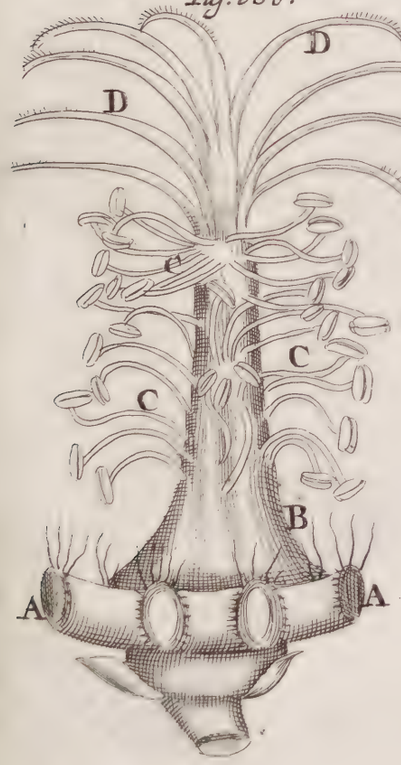
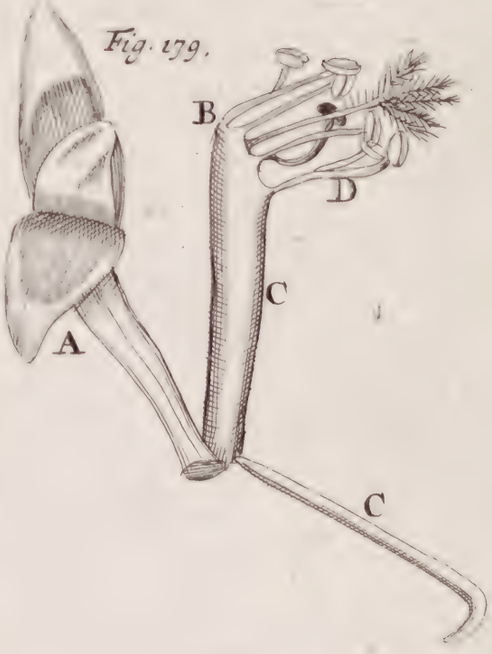


Fig. 181.

Fig. 179.



Tab. XXXI.

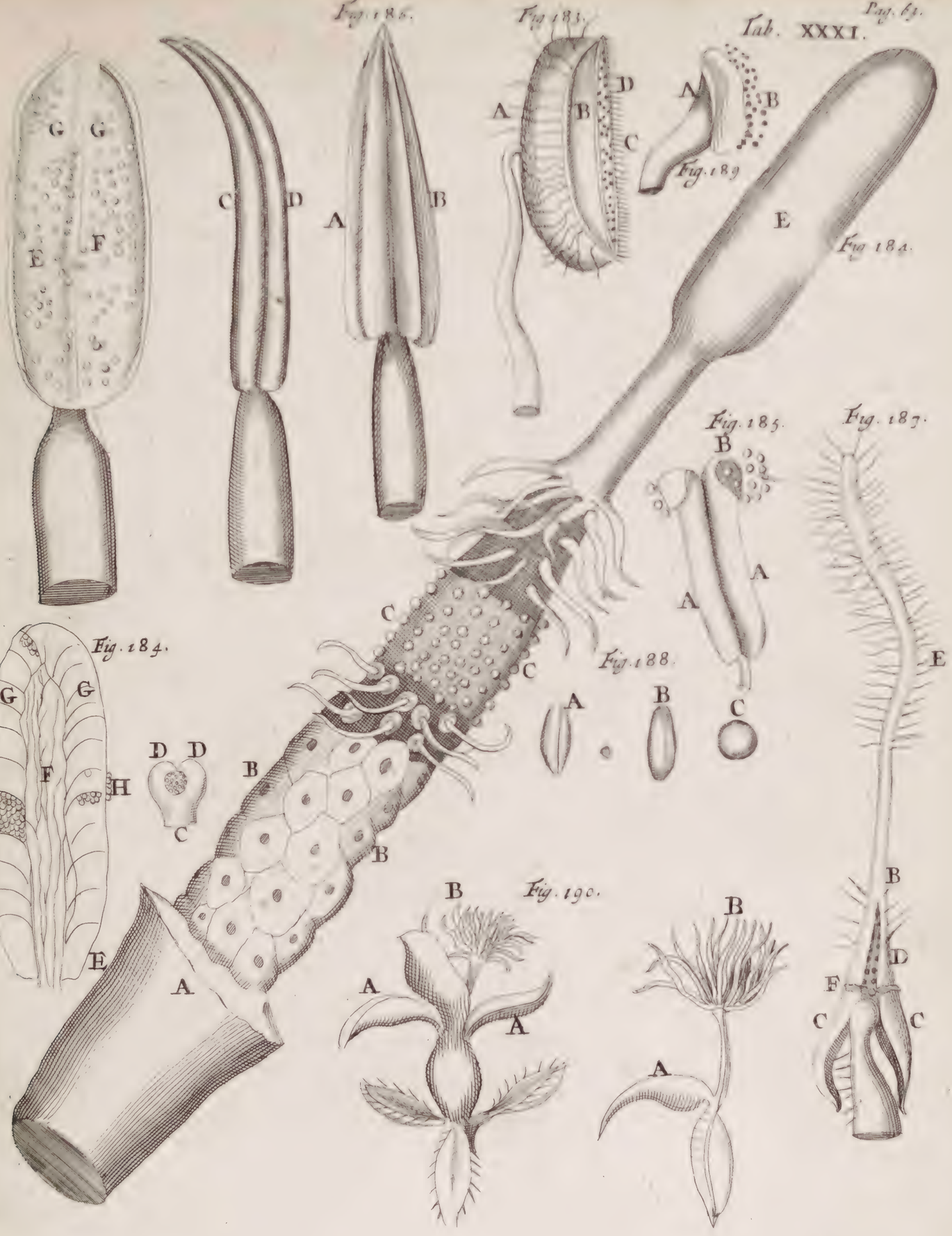


Fig. 186.
Fig. 183.
Fig. 189
Fig. 184.
Fig. 185.
Fig. 187.
Fig. 184.
Fig. 188.
Fig. 190.
G G
E F
C D
A B
A B D
C
A B
E
B
A A
A
B
E
G G
F
H H
D D
C
B
B
A
A
B
A A
A
B
D
F
C C

principio, à dilatata scilicet petioli substantia, quæ folia & stylum

glutinis oſtiat laxet.

ſtar, fuſco quodam excavatâ. Intra ſaculum au
ſunt, minus angulares videntur. H
contextum corpus *A*, globulorum capta
parátur
præcipue aſſi
fragmenta, tolli *capre*
totum partes, qua
cultruitur. *Stylus* igitur pars eſt, centrum *B*
eſt, ſemen fovens, appendice aſſurgit, ludique inter ſtam

Tab. XXXII.

Fig. 192.

Fig. 193

Fig. 191.

Fig. 197.

Fig. 196.

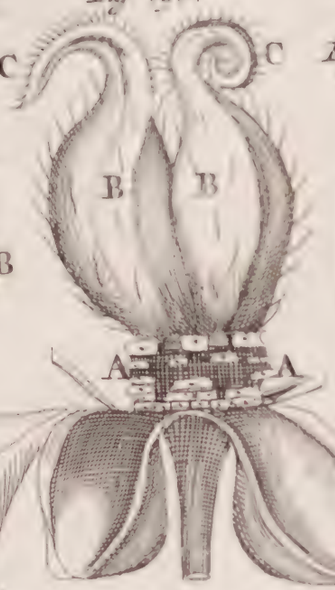


Fig. 195.

Fig. 199.

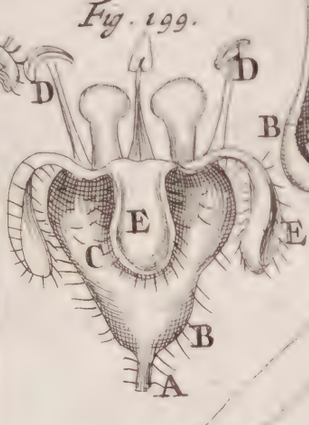
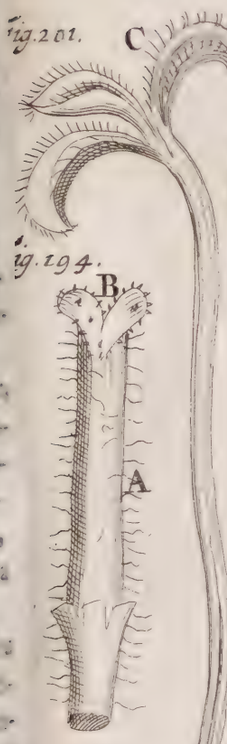


Fig. 201.



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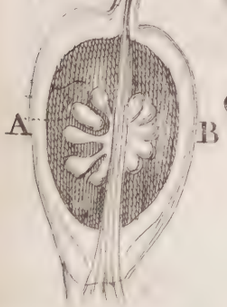
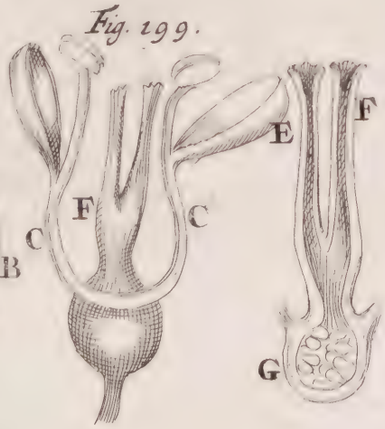


Fig. 199.



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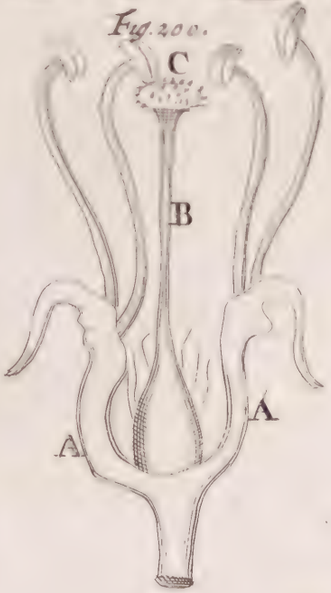


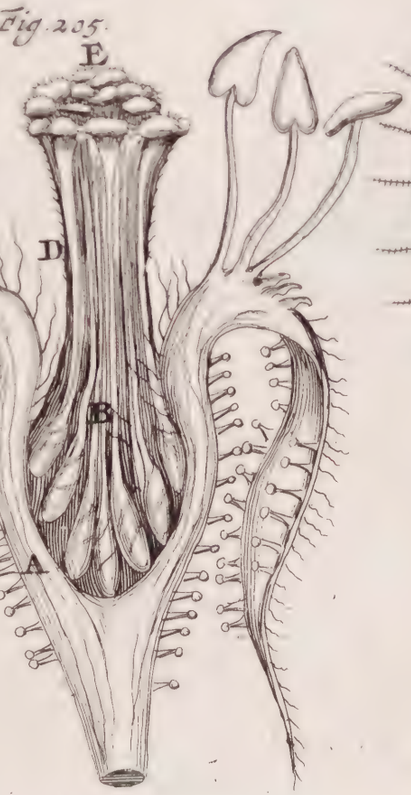
Fig. 198.

Fig. 202.

Fig. 203.

Fig. 204.

Fig. 205.



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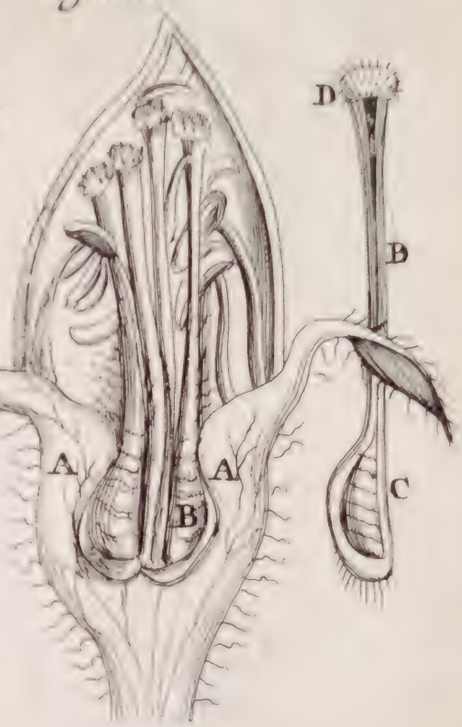

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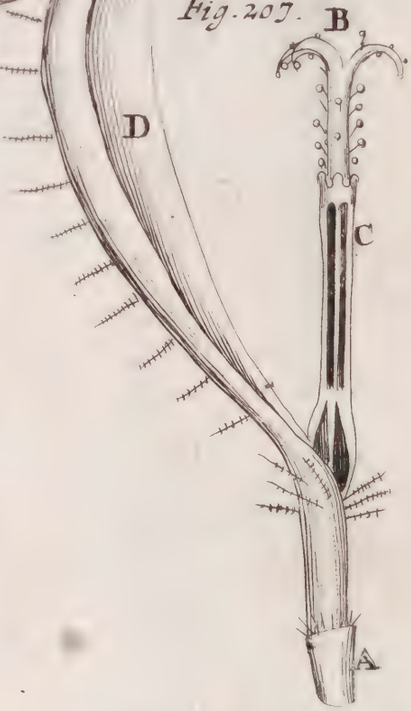
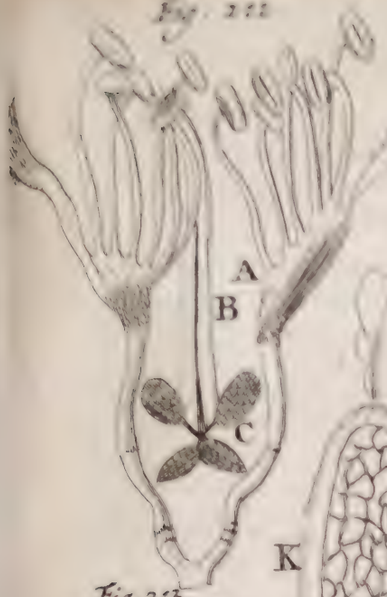


Fig. 211



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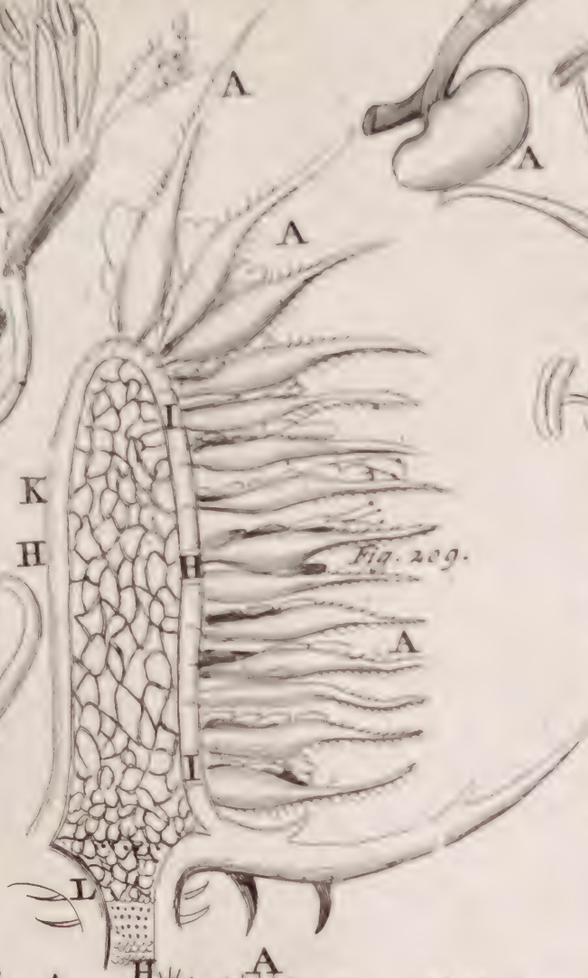


Fig. 209.

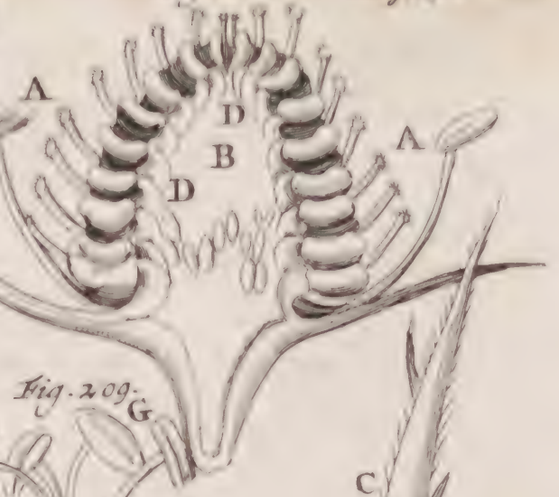
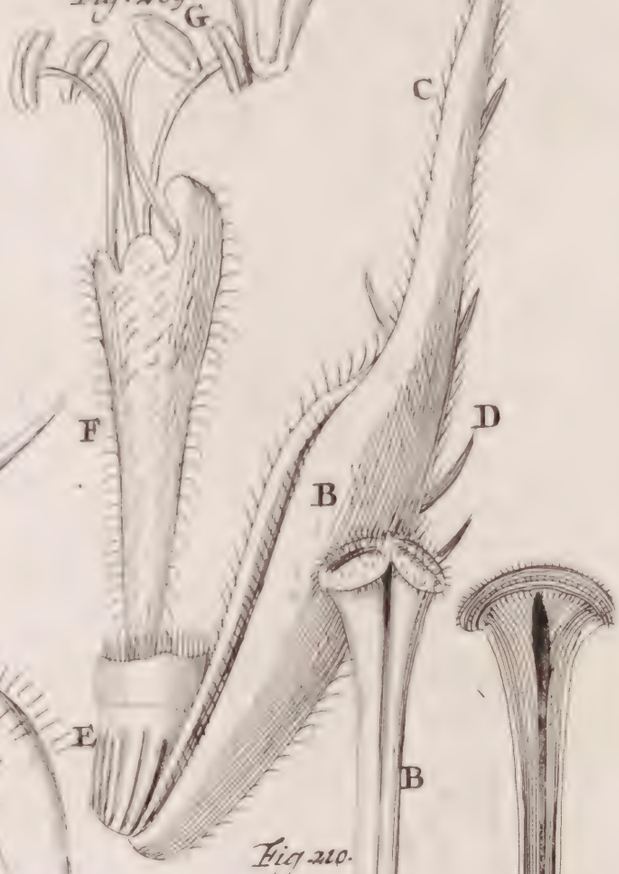
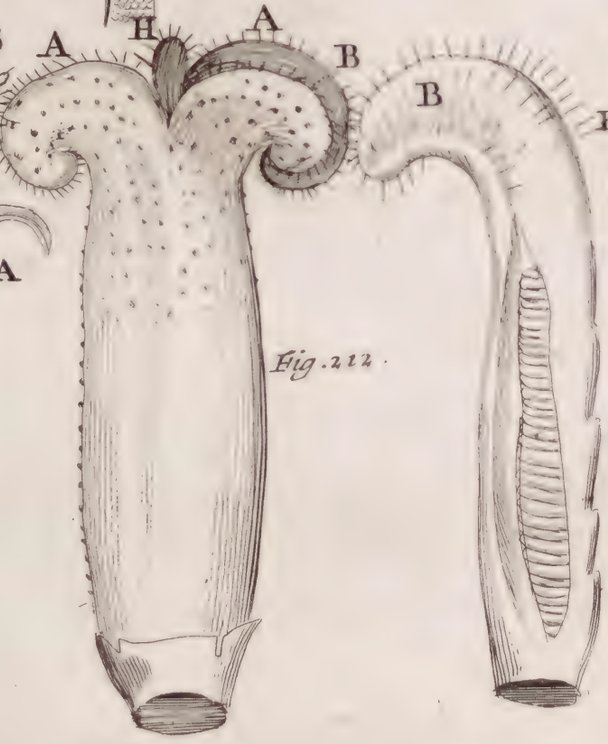


Fig. 208. Pag. 63.

Fig. 209.





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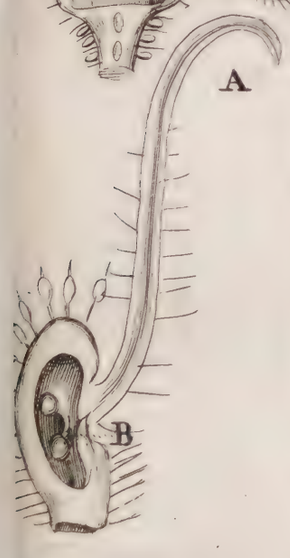

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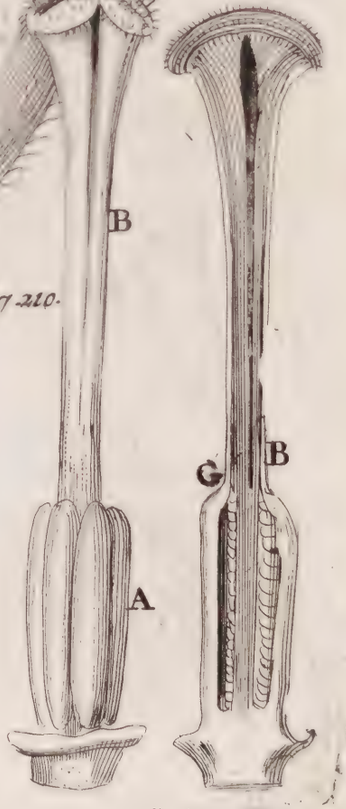


...bus *B*, & foliolis *C*, exortum præbet ... summitatem verò seu aream occupat lenti- ...
... progressu incedit Na... e 102: in hoc ...
... & ... tuba *C*, foli's ...
... præcipuè, 194, stylus *A* cu...
... quæ hunte tuba *B* conspersa fit al...
... tuba, ita pulsum in *pistil*,
... as verò plura cost...
... concavitate *C*, seminibus rel... cat. P... ira *malt Persi-*
ca, *amygdali*, *pr...*, &... target u...
... alterum l... D1... tenel um adhuc ste...
corpus *A* femina ... es appendices *C*
... & *malo cydonia* 206 eadem uterorum multitudo 6g. 206.
... stylus plura alit femina *C*, & ingent, coronatur capitu- ...
... quæ staminum capitula *C* continent, & horis so...

 ...lum

quo hinc inde copiosi flosculi *A*, quasi to
o scilicet, & concavo folio *B*, quod
ndicem *C* desinit, & spi *D* armatur. Flosculus
utrum *E* cum contento semine custodit, assurgente tubuloso
bus pariter staminibus *G*. Corpus, cui flosculi hærent, li
tamen loco pericarpii, fibrosis utraque productionibus *H* amb
ligneæ, & tracheæ *I*, in singulos flosculos deferuntur. Coercita m
pium *K*, utriculorum ordinibus, reticulariter implic
diculo sensim in solidos medullæ utriculo
tàm varia hucusq

hæc in *Narcisso*, & *lilio 210*, diveri
huiusmodi *B* definentes, per rimulas *C*, fi
, nam in fœto per
assurgunt *A*, & in as ductus *B* aperitur, in
culis *C* desinunt.

Vltimo x hiatu molles fistulas, pilos æmulantes, ut
bluteas, teret
: 2; cujus licèt breves sint
riorem partem tenellæ occ
morem. *In d Hammo Albo*

s hucusque ferarum fauces. Naturæ tamen mos est, vt ut animali-

hyemem foliolis gemmæ custodu

Fig. 214.

Fig. 215.

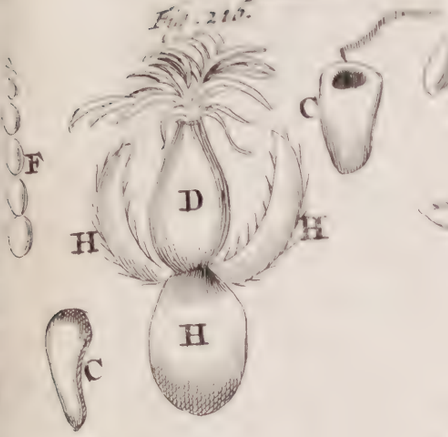
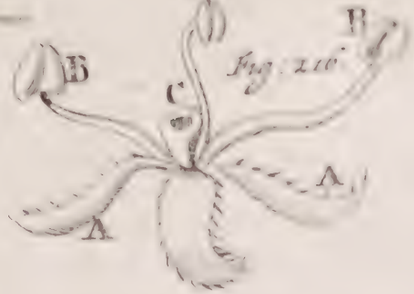


Fig. 216.



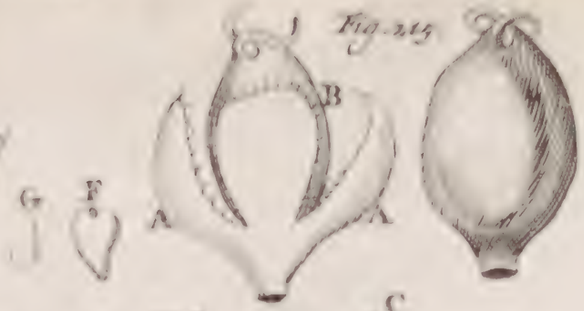


Fig. 217.

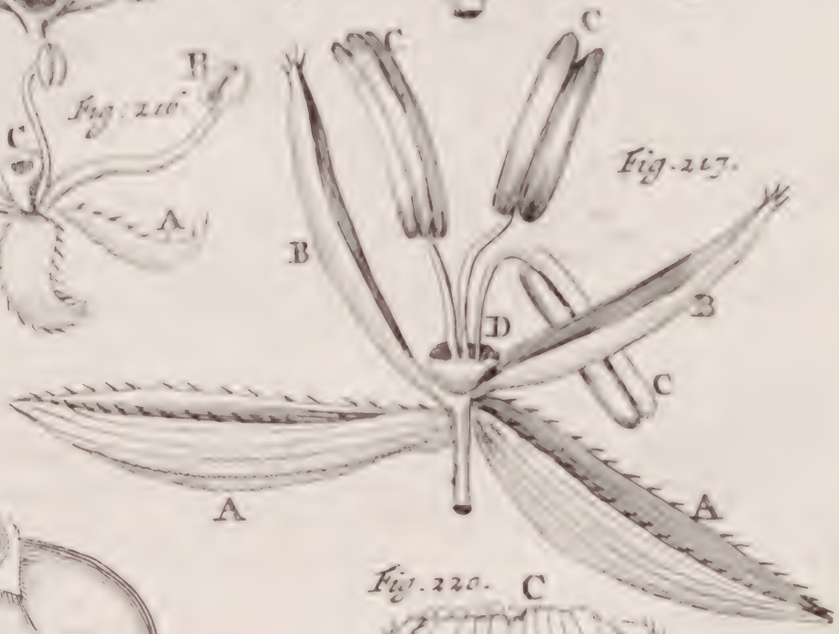


Fig. 217.

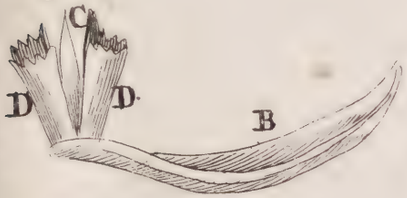


Fig. 219.

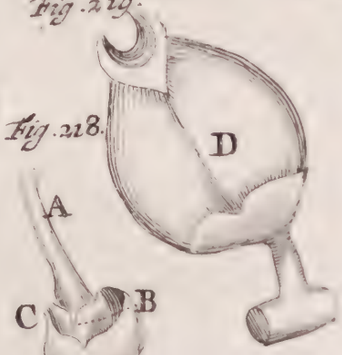


Fig. 218.

Fig. 220.

Fig. 221.

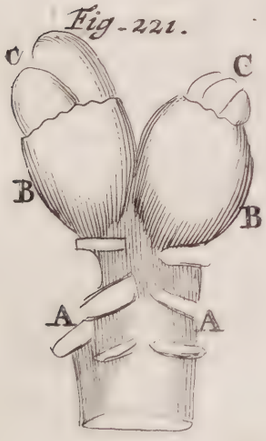
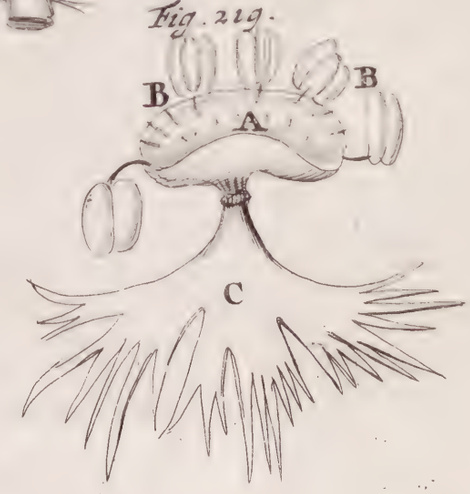


Fig. 219.



ANATOME PLANI

Vasa.

[illegible] pericarpii [illegible] quæ [illegible] A [illegible] quasi utriculi appenduntur. Laceræ [illegible] ramis tubis C, in cujus [illegible]

[illegible] B, quibus semen tectatur. A linguis pedicula C attenuatis, [illegible] & [illegible] & [illegible] &

Fig. 222.
Fig. 223.
Fig. 224.
Fig. 225.
Fig. 226.
Fig. 227.
Fig. 228.

proceres [illegible]
ille supplent. Flosculi hujusmodi, seu uteri, a communi exstantur calyce B, &
[illegible]
[illegible]
[illegible]

stur, sed, ne infecta tus irruant, sun

rrobabiliter de O

portior reta ne, ut expeditior & defæc
Huic pariter munen sub ura ttamina, fungi, & pa
læ tereta inam effundentes; unde fas est dubitare, naturam plu mum humoris,
hunceque verſæ substantiæ, seminum, generationi incongruum, per l
ctoria eliminare. Hinc fo
quæ in mulier proxime antece
nes succedunt, & pe o per ttamina & fl
ra in viviparis, qua quorsudo tolcere possunt,
fe cribrate per uterum foras protenduntur, ut reliquun
us v. feminis secretu tur, & in animalis na
eruptione maturitas spatium temporis requiru
ur, & his suppressis generatio tollitur, & v

n non edunt, & succi crud
ti ut productæ lobolis fœcunditas foliorum m
datis signa in *tulipæ* folus patent, &
Iam vero
n nece

s & tunis, (ut n plenis floribus observavimus,) ve
& nullus
rur, & abstamantur, nulliique

deputando, præparent auctuvam seminis

DE

Fig. 228.

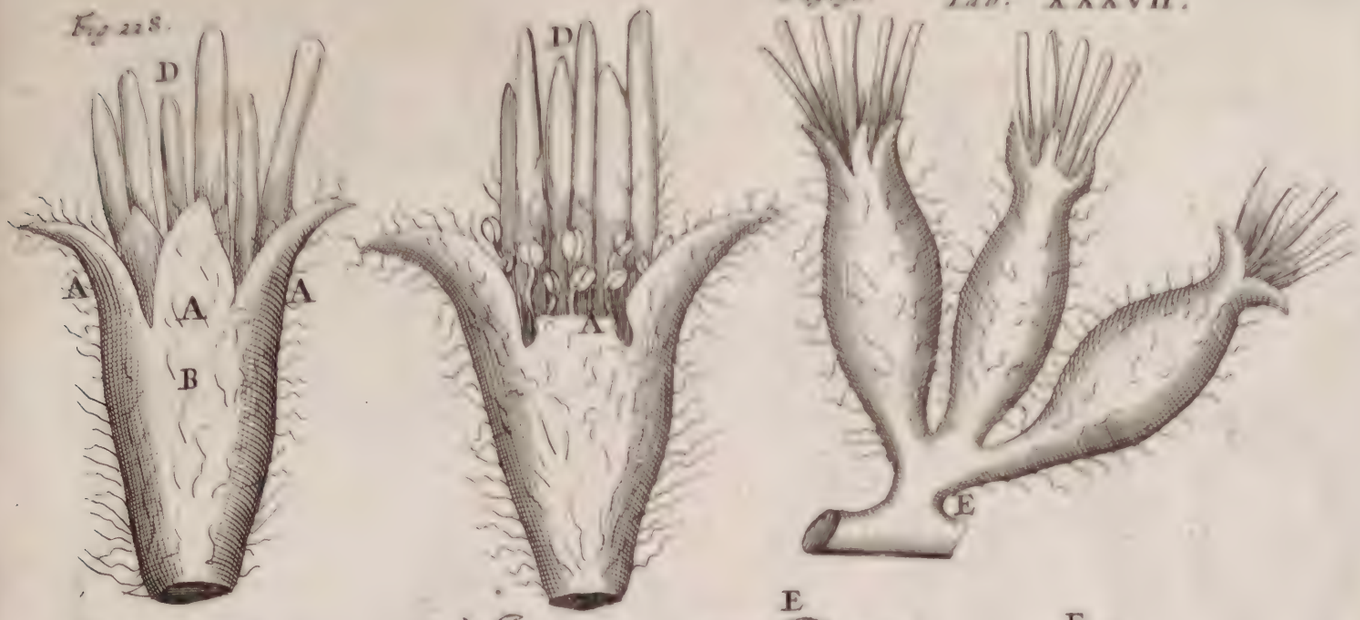
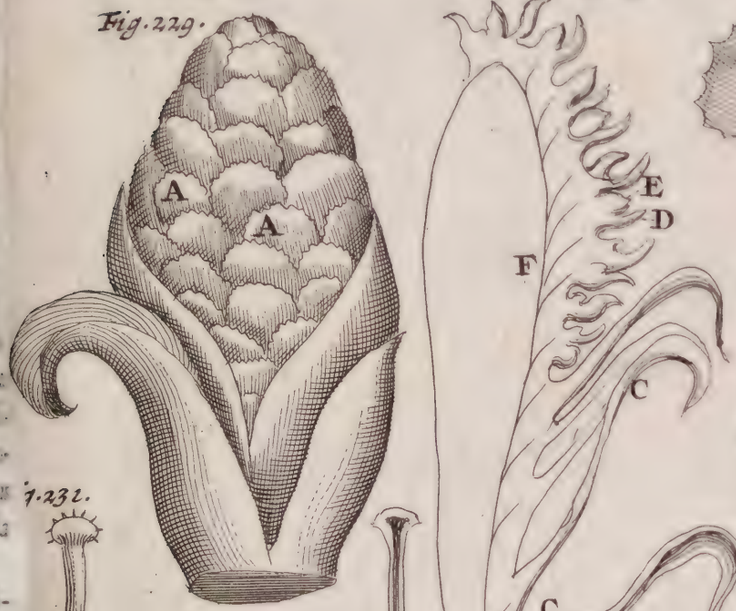


Fig. 229.



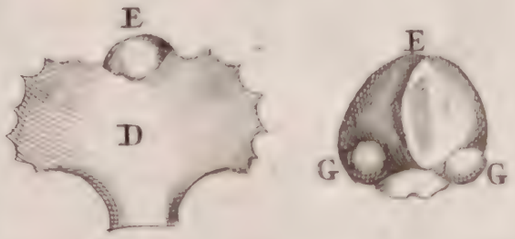


Fig. 232.

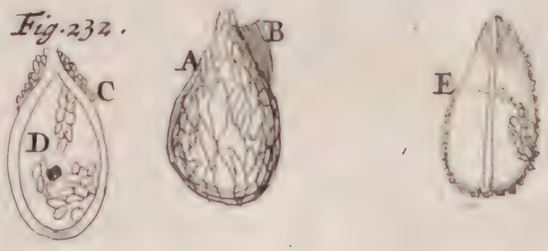
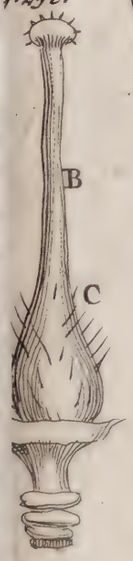


Fig. 231.



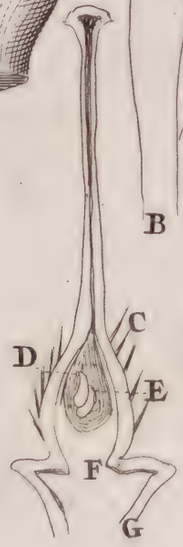
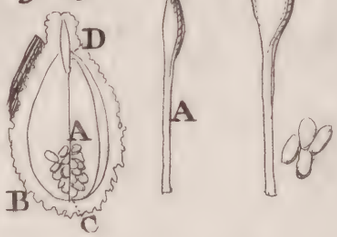


Fig. 230.

Fig. 233.



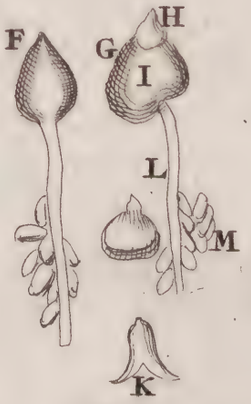


Fig. 233.

Fig. 234.

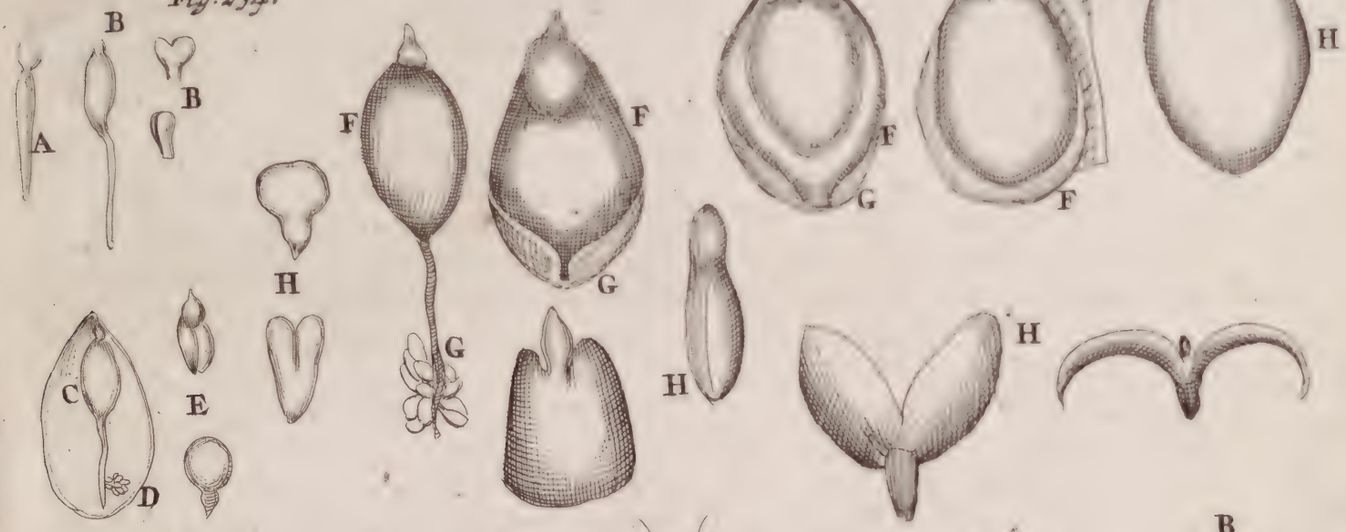


Fig. 236.

Fig. 235.

DE SEMINUM GENERATIONE.

[illegible] hiante infundibulo coronatur, quod cappilamentis [illegible] tunica, ornatur. *Tuba* hæc, quo magis arcte augeatu[r] [illegible] ne contabescat: Extenùs pilis & aculeis C contegitu[r] [illegible] custoditur. Ulteri ambiens substantia fibras & [illegible] [illegible] [illegible]

num Ge- tum specie imponant [illegible]
neratione. [illegible] coronatas tunicis suis [illegible] *pendu-* [illegible]
[illegible]
[illegible]
[

Fig. 237.

Fig. 238.

Fig. 239.

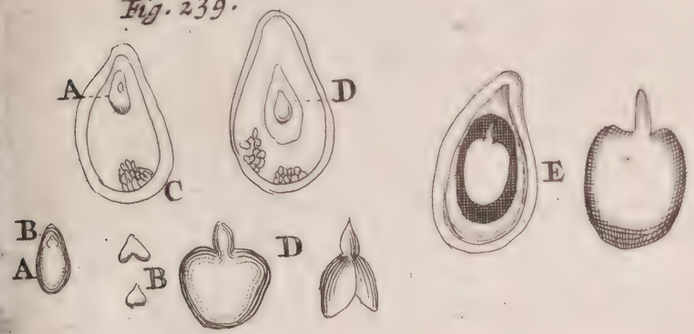
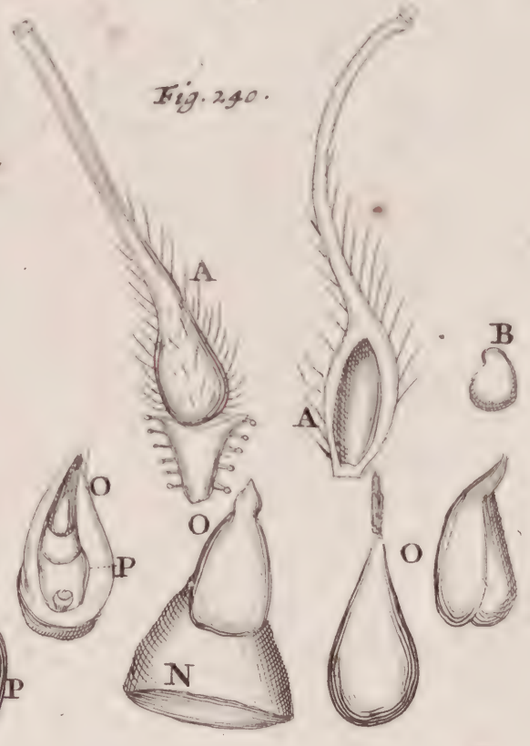
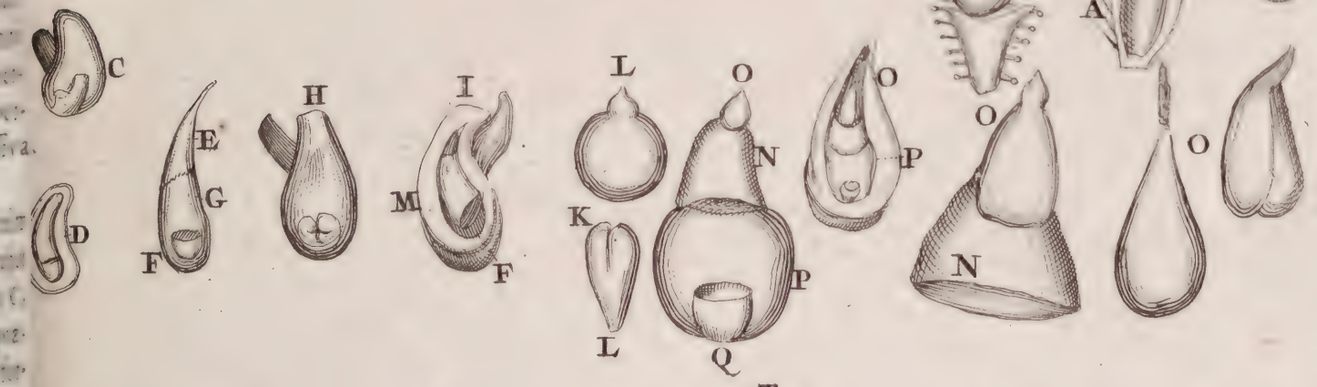


Fig. 240.





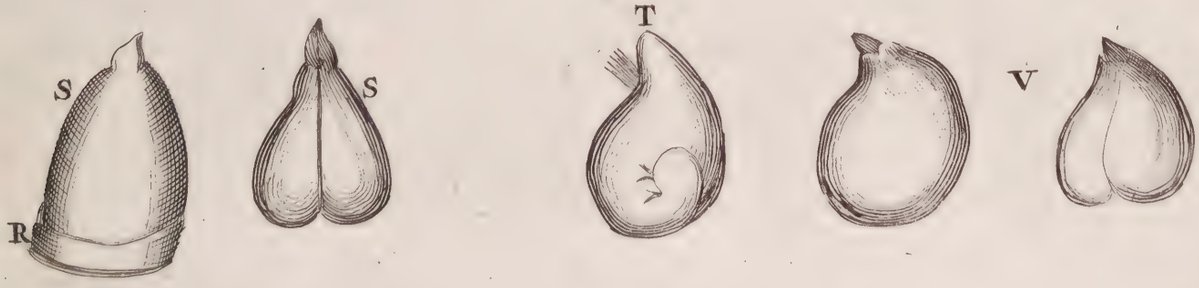


Fig. 241.

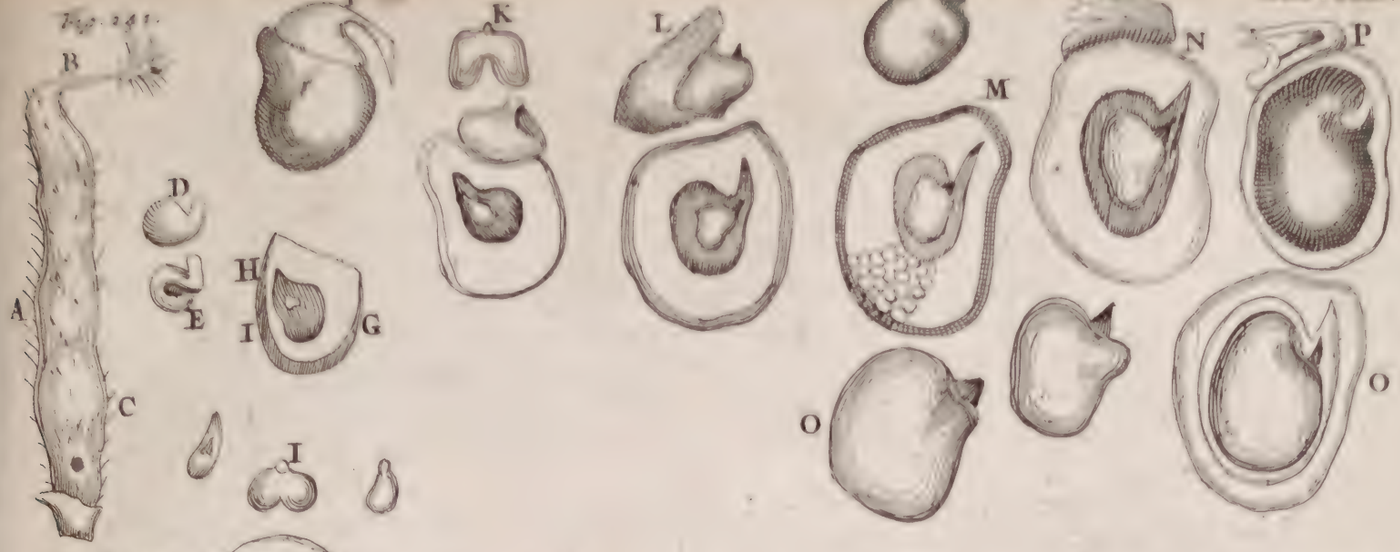


Fig. 242.

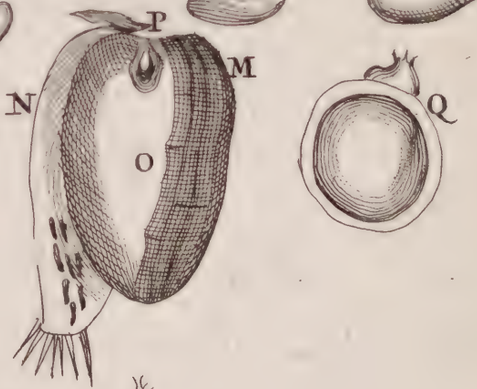
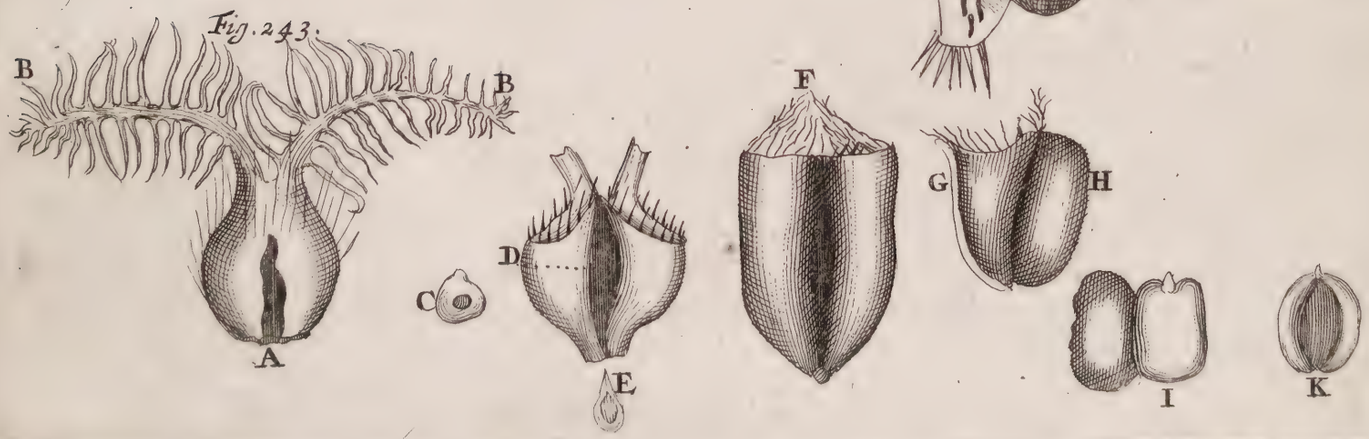


Fig. 243.



locatur; intermedi[illegible] indies secundinis H adaucti, [illegible] gemmis foliis K connivent bus, & radice L, constat. Corpus F adhuc viget; & chorii concavitas M humore [illegible] plantulæ O alimentum pra[illegible] & [illegible] pendet, sed hæc perpetuo invicem [illegible]

[illegible] pene [illegible], & adolescunt. Papilionaceus flos [illegible] seu uterum A tovet, [illegible], tubâque B donatum, [illegible] externus quasi ipsum [illegible] punt. Contentorum seminum figura est D, & interi tovea E excita [illegible] semen, pendetque à pediculo F. [illegible] seminum pa[illegible], & [illegible] cum angulari appen- [illegible] H, [illegible] gemmis contexta foliis [illegible] plet, contenta plan- [illegible] icombus K, L, M, N, O, P, Tab. X. fig. 341

[illegible] Tenellus uterus A, seminum in- choamenta tovet, quor[illegible], & in ipsorum centro minima con- cavitas C, colliquament[illegible] Senfim adaugentur, & acuminatior ipsorum redditur forma D, [illegible] mino similis. Crassefactis secundinis F, [illegible] quæ [illegible] H, [illegible] [illegible] pa[illegible], [illegible] longato [illegible], & [illegible] ta [illegible], & [illegible]; hæc, si extracta [illegible] (ac [illegible] [illegible] N, O, P nonnulla [illegible]

[illegible] minus tubis B, parum [illegible] In centro uteri, colliquament[illegible] [illegible], lentim contabescunt tubæ, & uterus [illegible] redditus, ti- [illegible]m D profundiorem exc[illegible]. Contenta partier secund na vir[illegible], co[illegible] mentum, ampliori contentum veiculâ E, ambit Collapsis tal[illegible] ita hæret, ut quasi ab ipso enasci, & elongari videatur. [illegible] K defunte, cujus basi p[illegible] [illegible]nc florida, hærent. Au- ctaus postremo semen N, [illegible]factum uterum, hic revulsum N, exhibet; reliquum Fig. 342

integrata partibus, custoditur.

chorio, cubat plantula g[illegible] ductionibus irrigatur; contenta verò seminalis plant[illegible] P interius exiguam servat [illegible] Q, quâ annu reliquum R cust[illegible]

[illegible] gemina plantulæ folia L, externus aspera, in globulum corpus comp[illegible] tur; diductis ant[illegible] patent, qui[illegible] olim gracilia, progrediente auctione gibba red[illegible], contingat? Cum igitur secundinis cocre[illegible] eisdem seminis substituetur materia, e[illegible] dices & a[illegible] *cassave* e[illegible] lus adhuc, per med[illegible] cula B conditur. Exarata cavitas hiatum habet in [illegible]ibam, seu uren Ipramenta C, quæ

[illegible]

ari constat secundinâ E, quæ cratila est, & multiplici ut ictiorum ordine co[illegible] abitur: Inter as arctus sacculus continetur, circa vesiculam K, cuncta c[illegible]

Fig 244

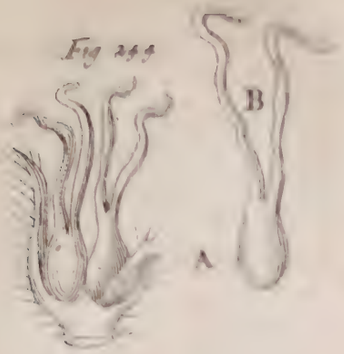
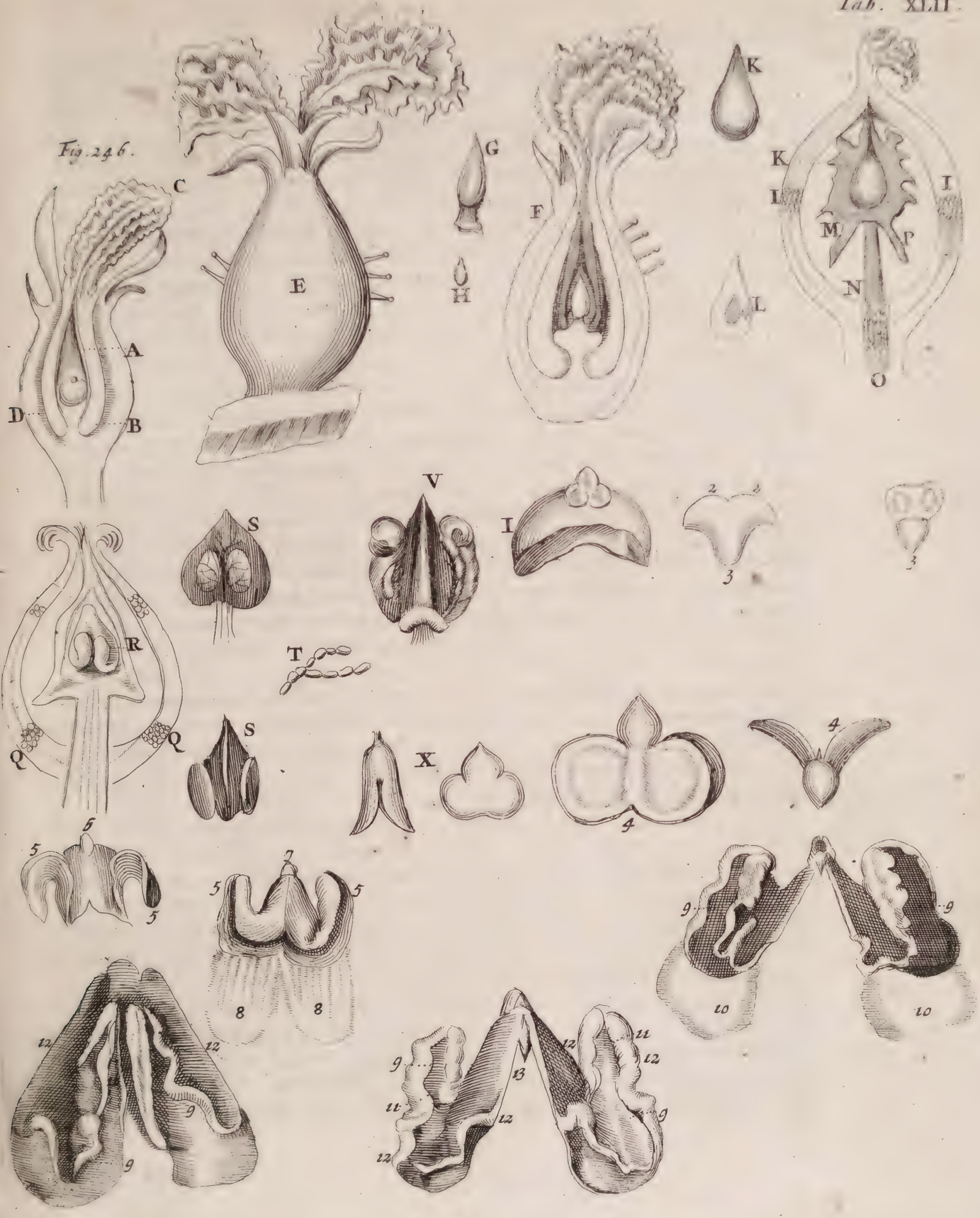


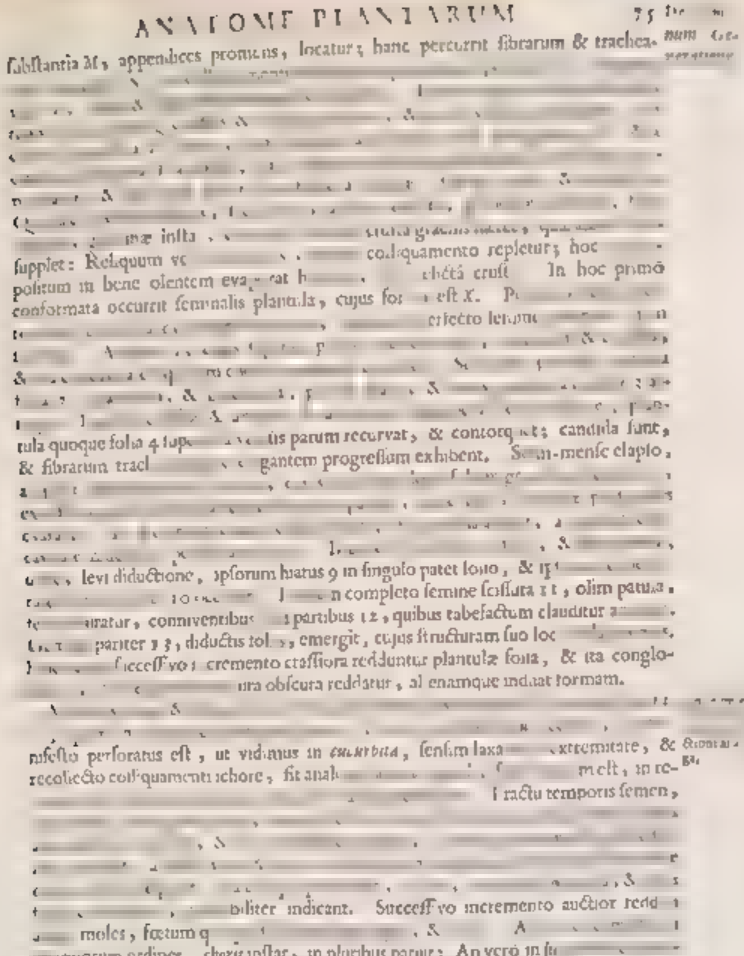
Fig: 245.

Tab. XLII.

Fig. 246.



substantia at, appendices promens, locatur; hanc percurrit fibrarum & trachea-

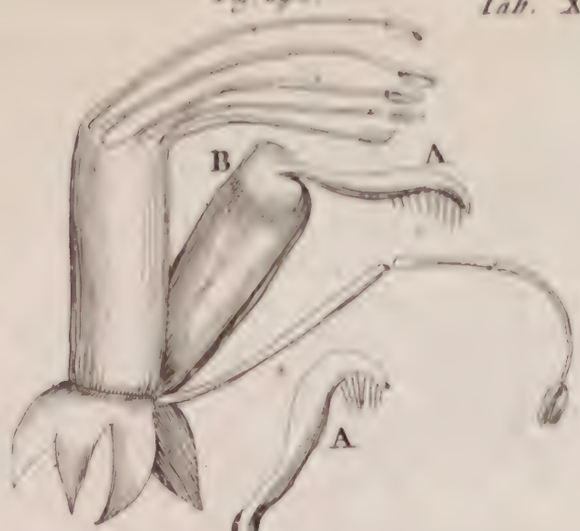


vices

Tab. XLIII.

Fig. 247.

Fig. 248.



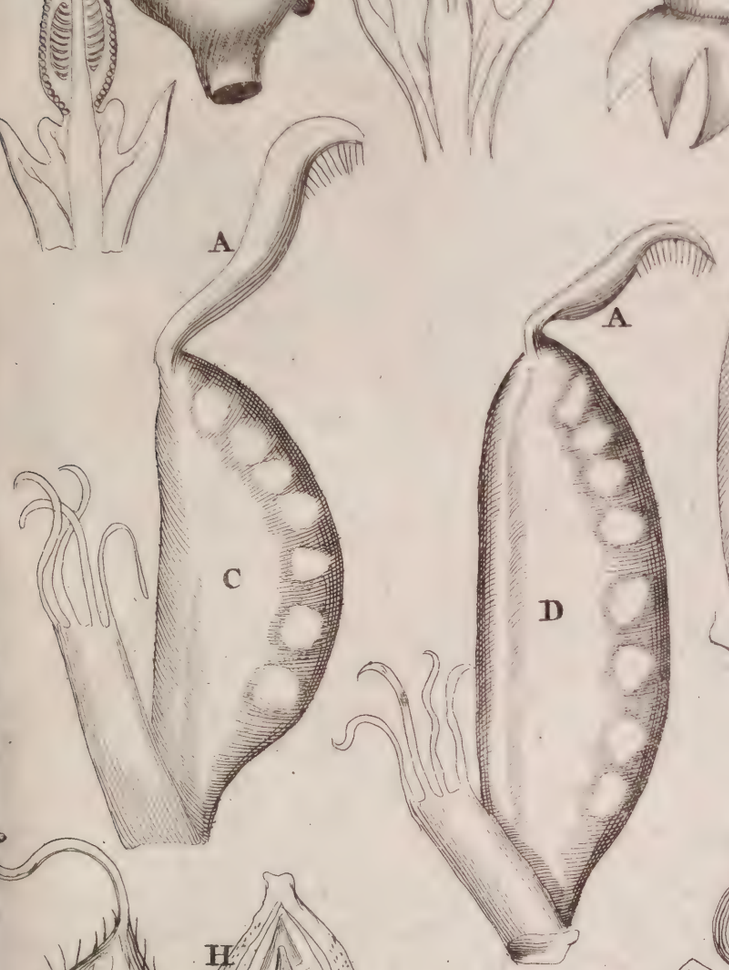
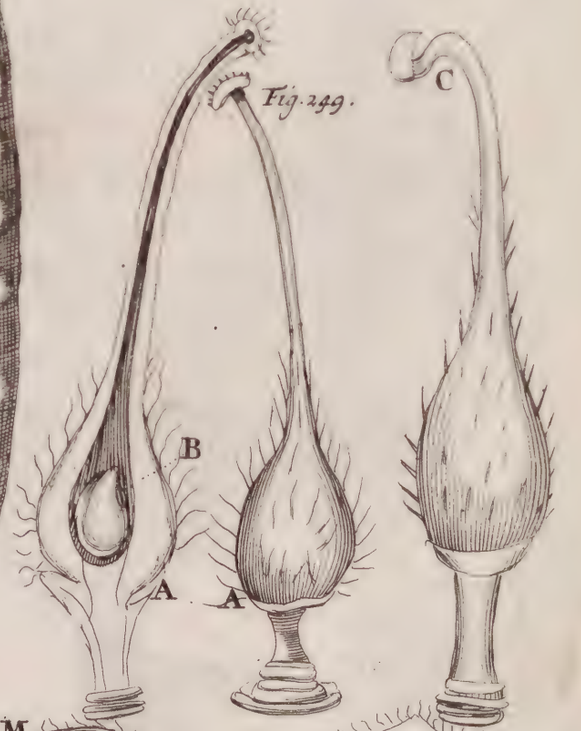
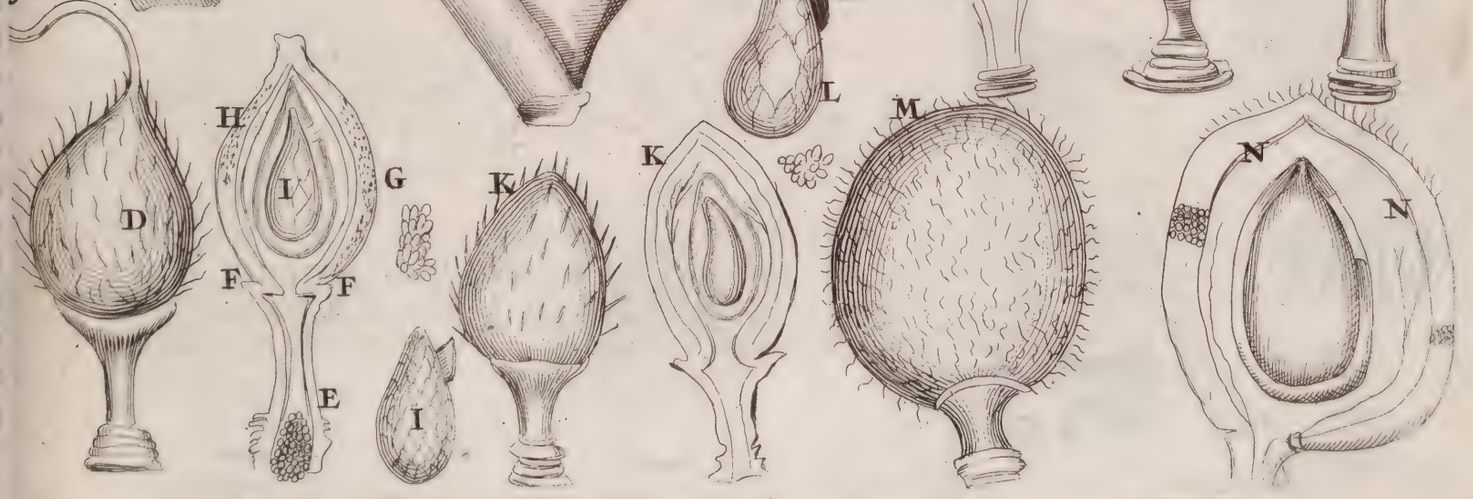


Fig. 249.





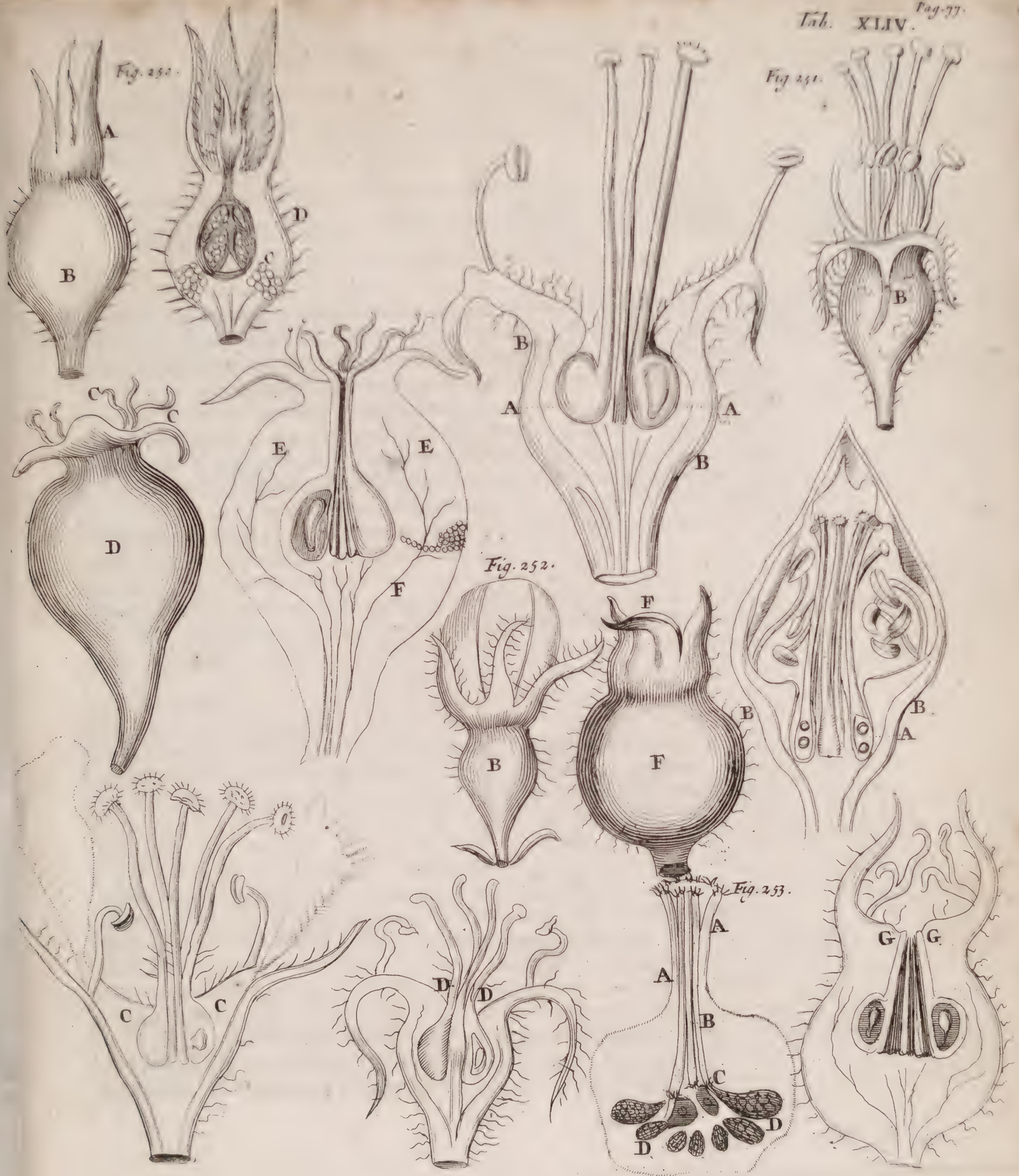


Fig. 250.
A
B
D
C
Fig. 251.
B
A
A
B
B
C
C
D
E
E
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Fig. 252.
F
B
F
B
B
A
C
C
D
D
Fig. 253.
A
A
B
C
D
D
G
G

excitatur. Interea probabiliter semen quan-

DE UTERORUM [illegible] & ILLORUM SUCCEDENTE FORMA.

Expositis in [illegible] veluti filius, canalis [illegible] ribus Uterum succ[illegible] pluraque [illegible] in *pyro*, *pomo*, *cerasis*, & [illegible] & [illegible] & [illegible] & [illegible] utriculi autem cortices B, [illegible] seminum capsulas C, velicularæ avido succo [illegible] quaccis, & p[illegible] [illegible]quum corpus, pericar[illegible] E exhibet In [illegible] is est, & lon[illegible] puma, [illegible] gracilescente ca[illegible] & [illegible] pater, in qu[illegible] & [illegible] sensim exiccata, [illegible] & [illegible] [illegible] & [illegible] & [illegible] K exarata manifestiora [illegible] & [illegible] obtusior & grandior fit [illegible] nucleus durescere incipit juxta exteriores caminas N; [illegible] Pari progressu molitur Natura uvæ [illegible] succus redditur; uterq vero [illegible] fit pro custodiendis corpo[illegible] pus primævam terva[illegible] Ita in *pyro* 252 præc[illegible] [illegible] Cotonea, vel [illegible] fructum vero in [illegible] NO

mento & forma.

[illegible] ſt pro loculorum peripratu; in cetero [illegible] ſtvli ſeu ſuctûs, tubarum [illegible] na C, quæ debitam non ſunt ſortita [illegible] em, foràs erumpere nequeunt, unde concluſa, adductis ſeminibus & pe- [illegible] nteriis condu[illegible] Tubis his continuantur peculiares concavitates D; unde tota Fructus compages eſt Uterorum coalitus & coagmentatio

Varia conſ

[illegible] & [illegible] cpoem

Primò itaque ſimplex occurrit *burſa paſtoris* 254 loculus, ſeu Ute[illegible] bi[illegible] P[illegible] ſe[illegible] a D pendent. *Thlaſpi* 255, panter Uterus binis conflat mem[illegible]

[illegible] rquetur. In *Matthioli hyacintho* 258 tribus diſtinctis cavitas A c[illegible] dantur ſemina, *B. Gittago* 259 ſupra exſiccatum calycem A [illegible] raliter aſſurgentes p[illegible] d. C, ſemina D ſuſtinent, & alunt. I[illegible] lapſis tubis, tandem [illegible] terus, pluribus coagmentatus [illegible] olis A, propria ſemina cuſto- dientibus. In *Malva* 261, conſumptis panter c[illegible]

Fig. 254.

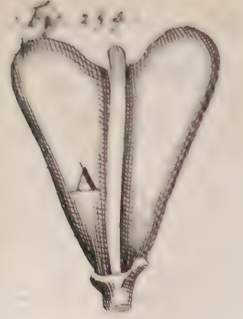


Fig. 255.

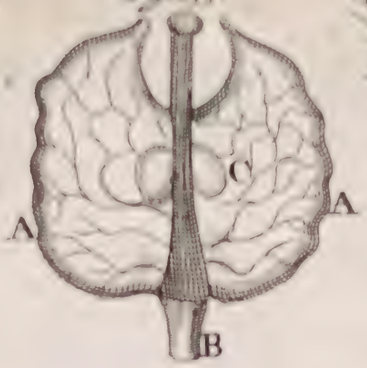


Fig. 256.

Fig. 257.

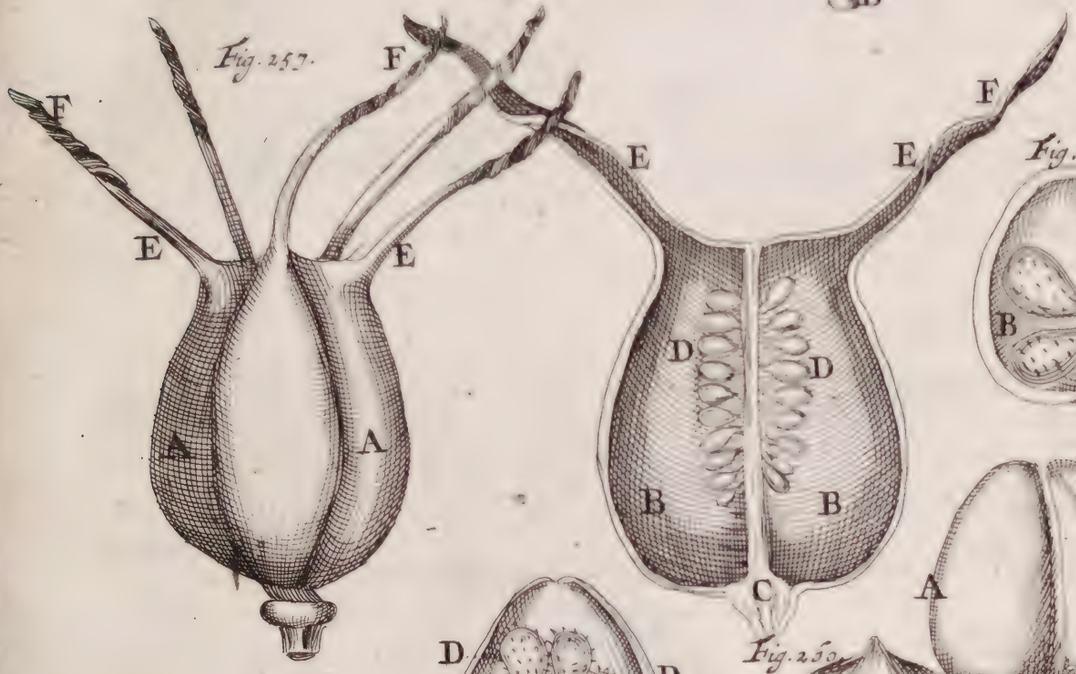
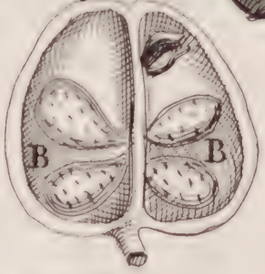
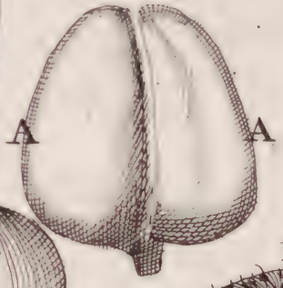


Fig. 258.





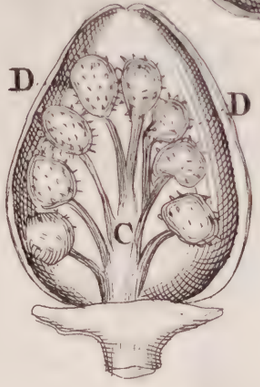


Fig. 260.

Fig. 261.

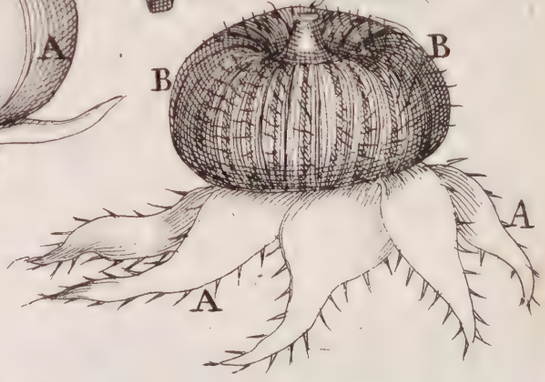
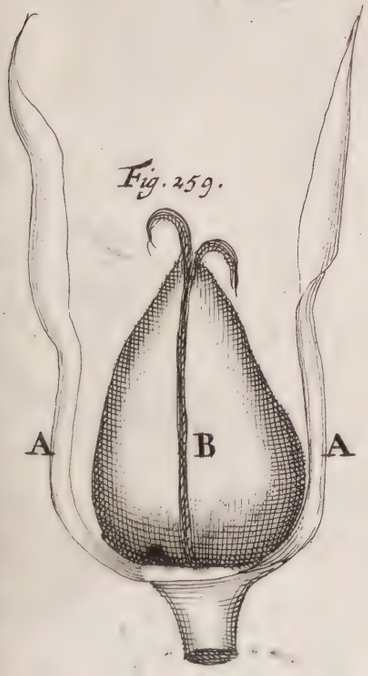
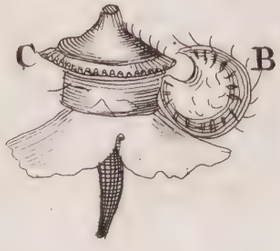


Fig. 259.





Tab. XLVI.

Fig. 262.

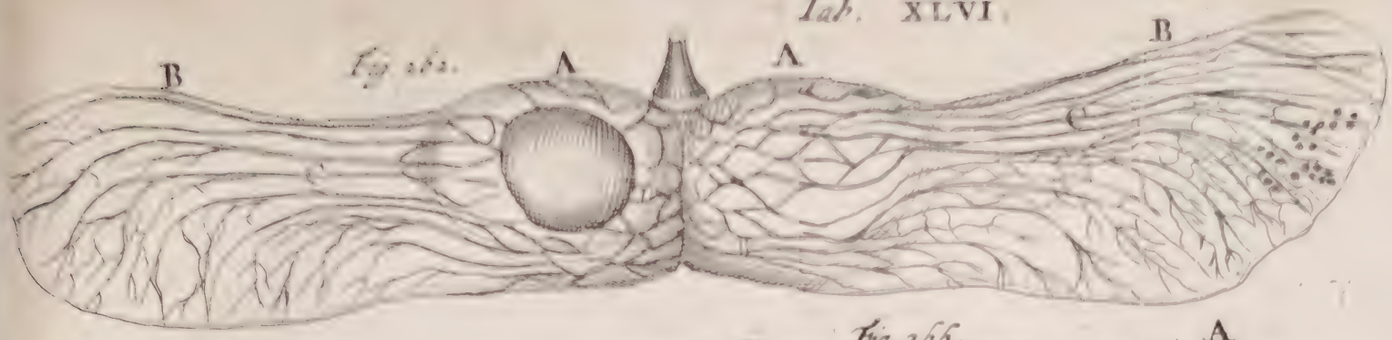


Fig. 266.

Fig. 265.

Fig. 264.

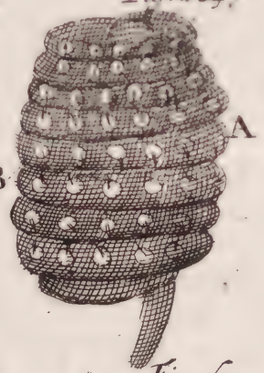
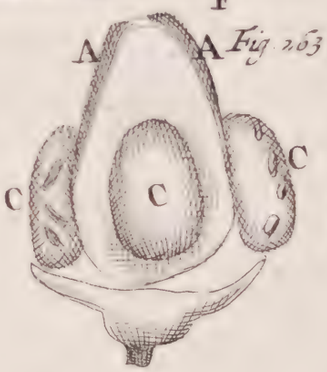
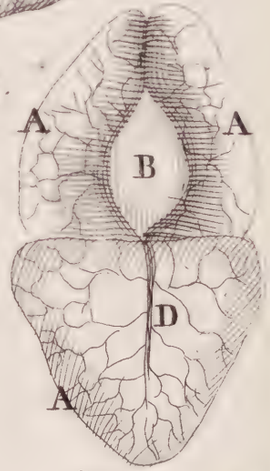


Fig. 263.





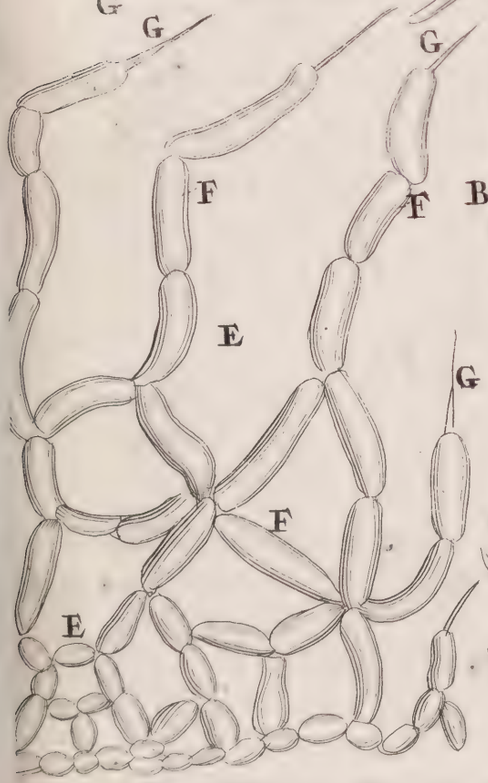


Fig. 267.

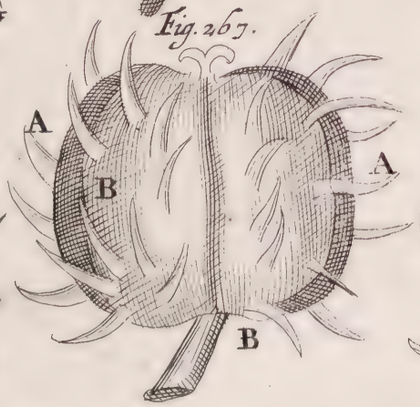
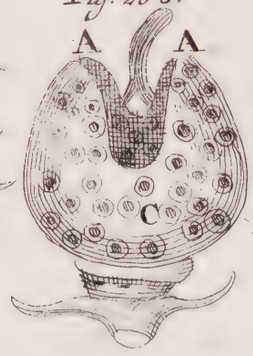
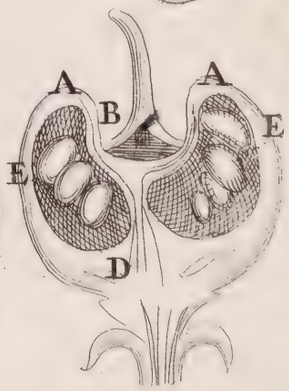


Fig. 268.





[illegible] fissuræ seminum capsulæ *B*, versus centrum litus [illegible] *Anatomia Auctorum*

[illegible] am lemen *B* cu-

[illegible] hisce memoratis tegumentis, seu potius uterinis alia, [illegible]

[illegible] C, utriculi s[illegible]

[illegible] & [illegible]

[illegible] ſtantia, & in aliquibus ſpinæ, quæ [illegible] *Structura pe-*

[illegible] & [illegible] riori constans formâ, in

[illegible] ſ[illegible]

[illegible] & [illegible]

[illegible] ſ[illegible] Totus paries, reticulari opere *D*, ex tracheis, & [illegible]

[illegible] derivato a fibrosis fasciculis, [illegible] m contula[illegible]

Versus [illegible] m per transversum excurrunt [illegible], [illegible]

[illegible] liter & obscurè observantur; hæ [illegible]

[illegible] pili molles *H*, & quasi capil[illegible]

[illegible] *Lupinorum*, & *fabarum* 266 [illegible]

constant corporaturâ. Hujus forma oblonga est, & [illegible]

[illegible] L[illegible]

[illegible] glomeratæ corporibus minimis. Ab interiori siliquæ superfi[illegible] pe-

[illegible] carpi elongatæ appendices *E*, [illegible], [illegible]

[illegible] & [illegible]

[illegible] & [illegible] Sp[illegible]

[illegible] bus, & præci-

[illegible] pue [illegible] & [illegible]

[illegible] & [illegible] M.

carpium, quo diversæ capsulæ *B*, femina cor[illegible], p[illegible]

268 stylus adunctus, quadrupliciter obtusâ attol[illegible]

[illegible]

partes *B* em[illegible]

[illegible] in quibus femma copiola *C*, horizontaliter quali ftuata, aliud[illegible]

[illegible] gitur noftrate, per le[illegible] membranulâ *B* obvelatur, à qua fpinæ recurvæ *C* prodeunt; fub hac con[illegible] ligneæ fibræ, fafciculi fcil. D, reticulariter inofculatæ.

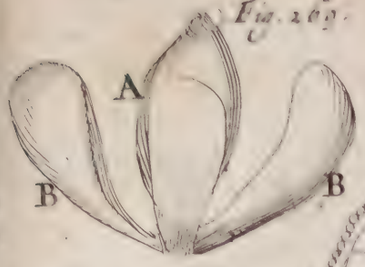
[illegible] Patem configurat[illegible] bus, & *cucurbita* ipfa miramur. In his inte[illegible]s pendentia fen[illegible] *Cerafa* 273, & confimuta arop[illegible] ro, à pediculo *A* a[illegible] offeum nucleum *B* progred[illegible] ceraque ramulis analtomolatæ totam[illegible] fafciculis, fuâ tracheâ ditatis, ut[illegible]

[illegible] nendice D, offeo nucleo E unitur [illegible]. *Post* [illegible] uterofum uterus *A* multiplo[illegible] s *B* munitur, femenq[illegible] gneis fibris *D* irrigatum[illegible]

[illegible] ous [illegible] confus[illegible] ftructu[illegible]

[illegible] er in *pro* pediculus lignens & l[illegible]

Fig. 269.



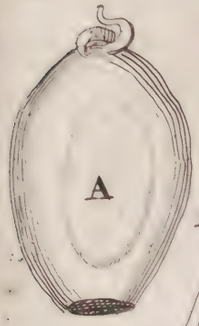


Fig. 270

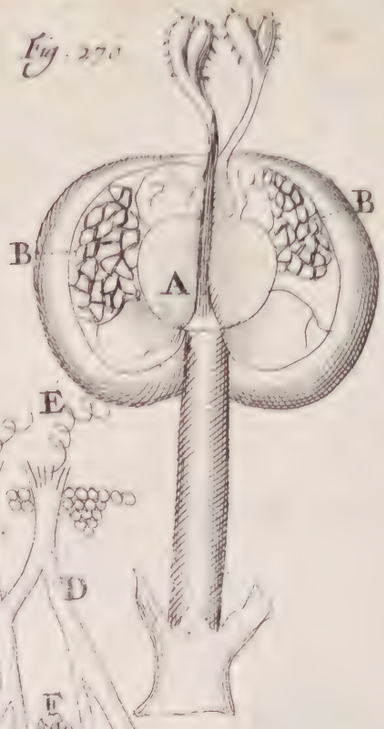


Fig. 271.

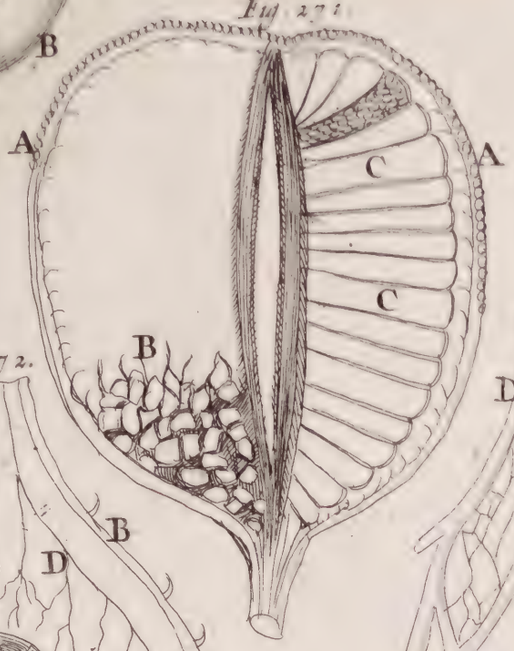
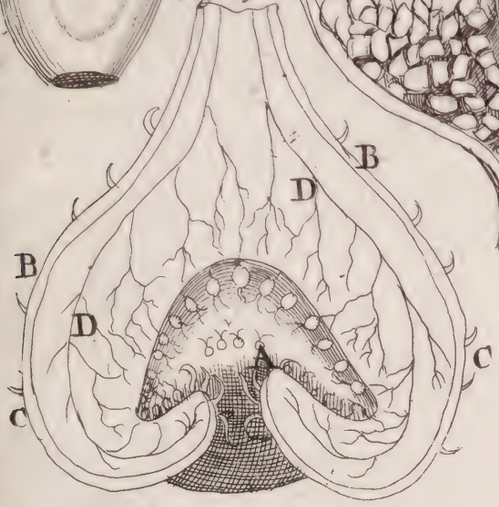


Fig. 272.



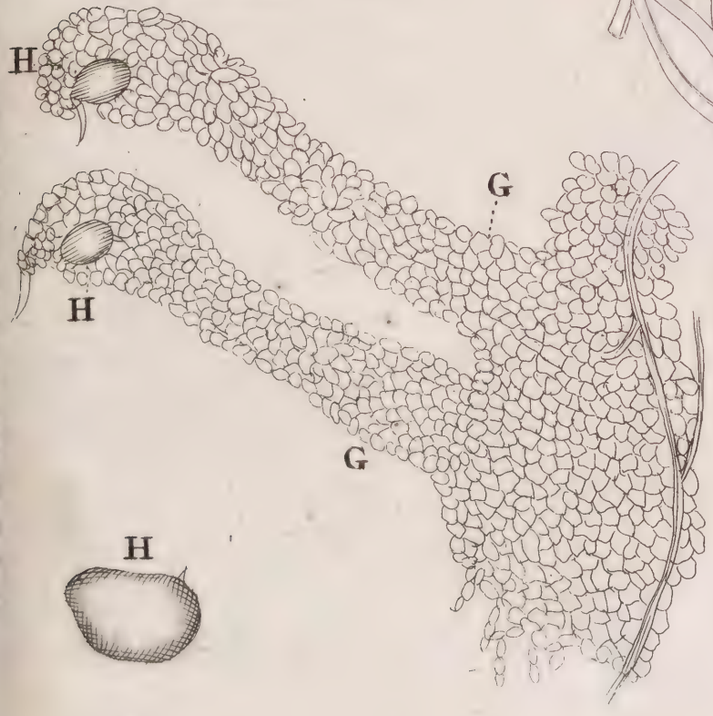
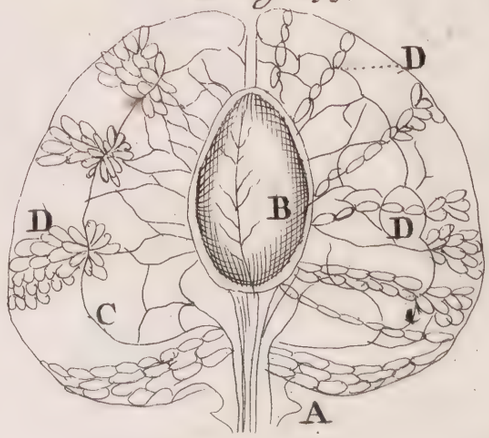


Fig. 273.



Tab. XLVIII.

Fig. 274.

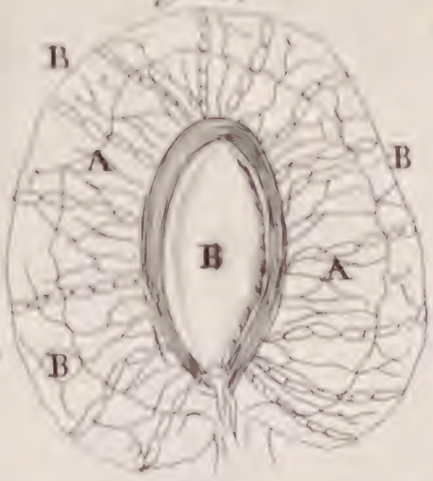
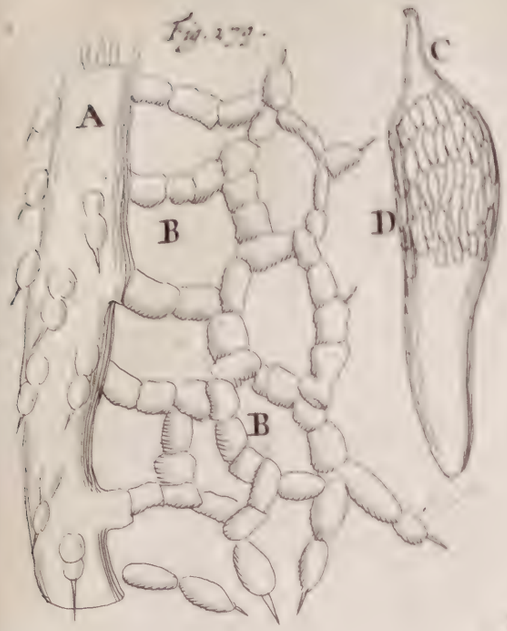


Fig. 273.



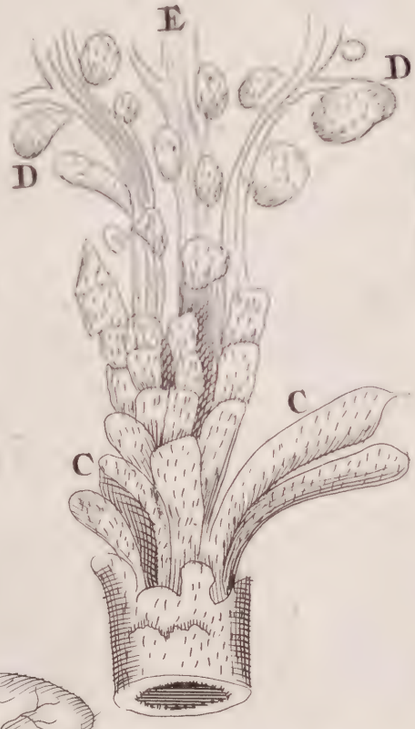


Fig. 276.

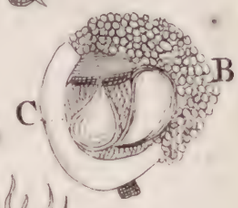


Fig. 277.

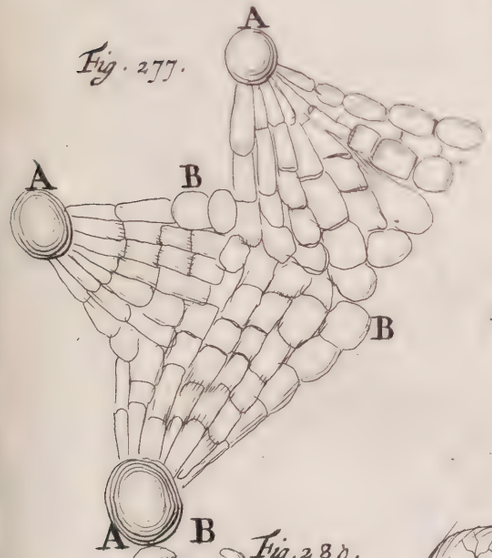


Fig. 275.

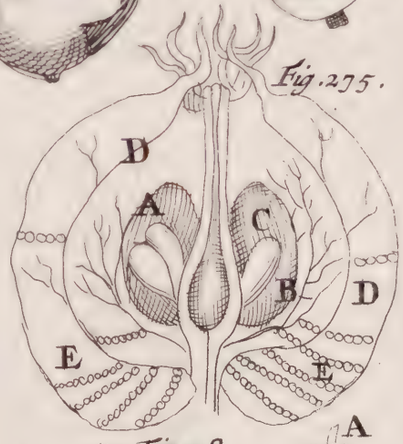
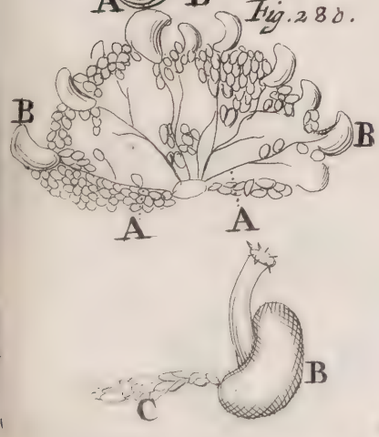


Fig. 280.



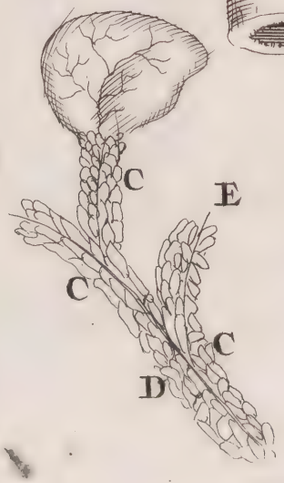
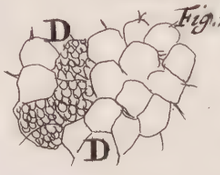
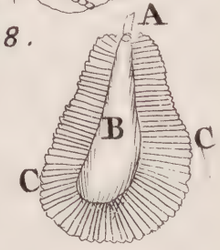


Fig. 278.





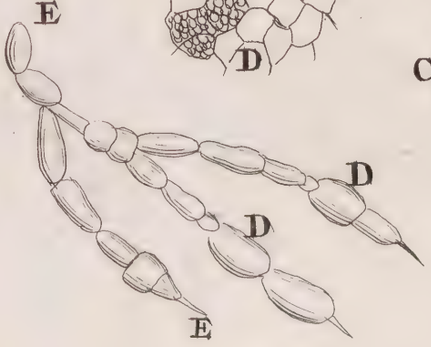


Fig. 281.

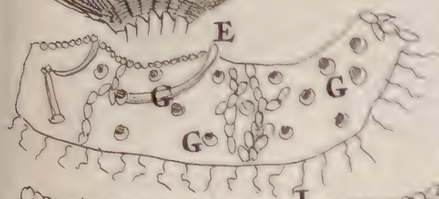


Fig. 285.

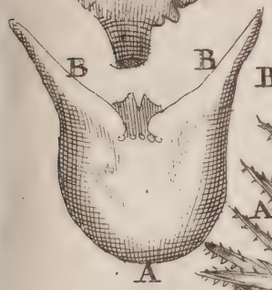


Fig. 286.

Fig. 283.

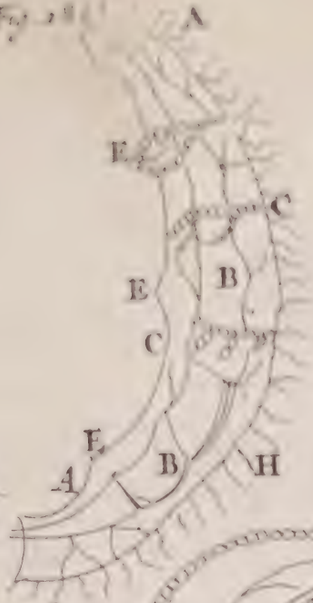


Fig. 284.

Fig. 281.

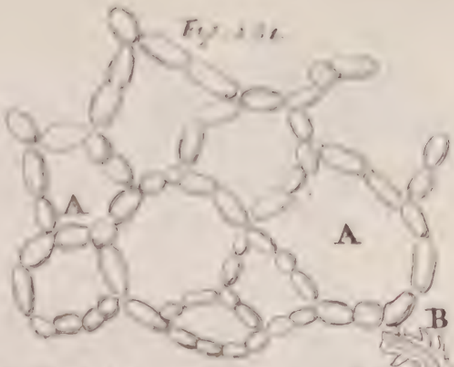
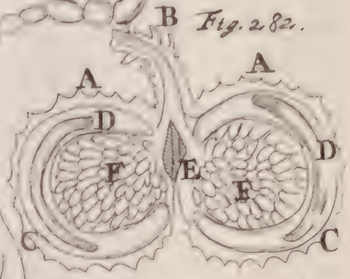
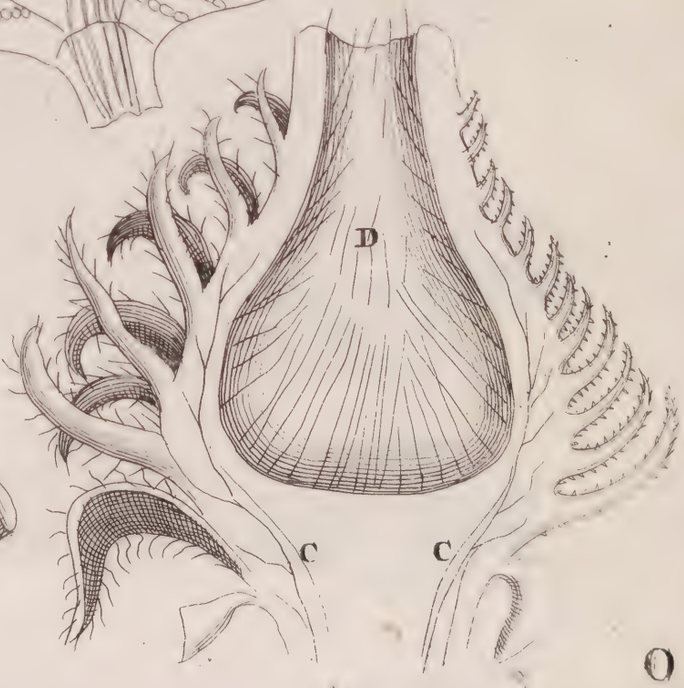


Fig. 282.





[illegible] & [illegible] [illegible] [illegible]

[illegible] concep-
formia.

Mos eſt uterus Na[illegible] glecto pericarpii augmento, oſſeum nucleum augere, quo ſemen tutatur: [illegible]

pericarpio illud mirabile eſt, quod circa [illegible]
ipſarum enim utriculi E, qui o[illegible]m pericarpii [illegible] taro petrificati, in hanc deſinunt naturam. Interius appen[illegible] bus invicem laminæ nectuntur. Ex præcipitato per[illegible]

[illegible] Hæ

brarum & trachearum faſciculi E, non ſolum interior pericarpii ſuperficie [illegible] leo hærent, in quo delineatæ productione [illegible] vaginæ excavantur [illegible]us, pericarpio contiguus [illegible] reſert, eiſdem en[illegible]

In quamplurimis plantis exiguum in utero extendi[illegible] oſſeus nucleus incluſum cuſtodit ſemen. Hoc paſſim in *ſpinaceorum* 285

[illegible] te autem mutuæ contorquentur acuminatæ tubæ [illegible] is Uterum ſeminum cuſtod[illegible] [illegible] s deſideratur pericarpium, eiſque loco ignæ eruptiones [illegible] addantur.

Fig. 288.
Fig. 287.
Fig. 286.
Fig. 291.
Fig. 290.
Fig. 289.

contenturi ... a ceum sunt quasi ova ha & ... forma ...

... interiores ... h D adhuc ...

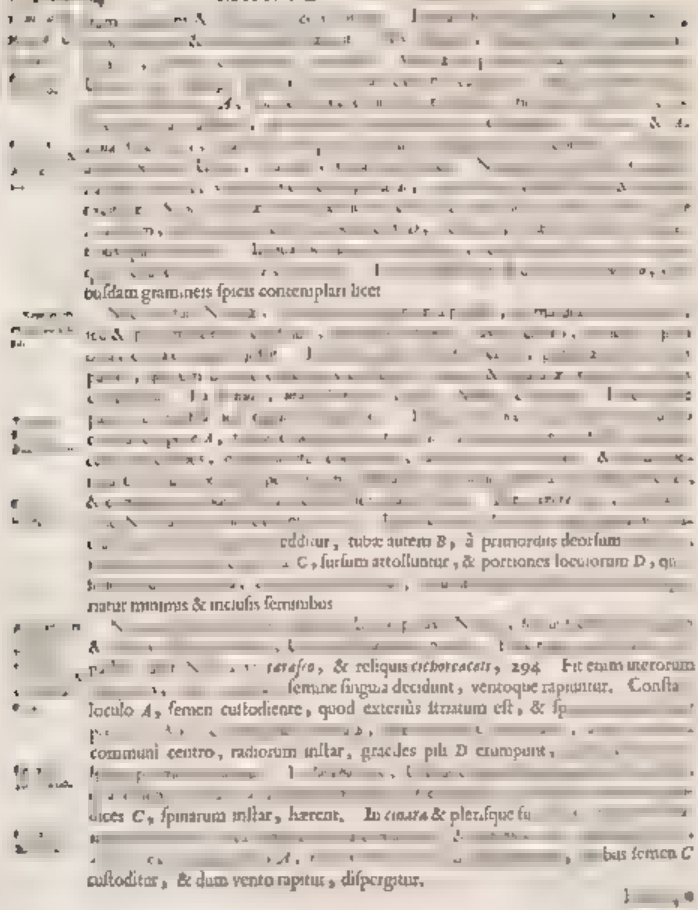
... substantia, à principio mollem sortita, ... in q ...

... cubi exc ... a ... f, ... m- ... In Capsula ...

cheris C diremantur hinc inde, quibus ... p ... l ... m- ... que pe ... p ... D ... t, ... tra ... t ... m ... t, ... tre ... & lax ... ur ... Per ... A lignea cost ... c ... l ... s, & ... r ... constitar, lignique solidi ... m ... ; ... gulas ... cæ partes prod ... r ... l ... r ... r ... moles. Crea ... mos ... c ... n seu sæculorum ordines H, quibus reticulares utriculorum pl ... s ... induntur. In hoc itaque ligneo per- carpio pl ... l, ...

Interiorum, qui Pericarpio deficata ... ductus.

... per ea prom vel osseum ... Mò fas est, ... p ... m ... t ... mus, quos ... q ... v ... c ... m ... t, ... spicarum jubæ & ... s ... cc ... s, ... tamen ... U ... p ... m ... per ... f ... t ... n ... q ... & ... D ... n ... c ... l ... x occ ... t ... o ... x ... 288 f. 288. a. Cono- ... c ... x ... r ... a ... r ... n ... c ... c ... x ... m ... ea ... ex ... r, & ... p ... x, a quo ... m ... r ... c ... m ... r ... e, hocque munitur femen C. Idem in reliquo calami accidit; cum hoc tamen, quòd ... m ... tra ... pl ... n ... f ... m ... a, ... p ... t ... ent ... bus D ... S ... c ... rea ... pe ... m ... ta pendere ... , ... , ab uno ... brefo petiolo. U ... p ... ad ... fe- men gemmas tegitur involucris, quæ *glumæ* appellantur. Huc succedit *phalaridis* fig. 288. in Phal. Pratens. pratensis Veterum 289, qui pottoribus excitatur inc ... ments; in hoc spica quædam ... c ... v ... c ... , ac ... o a ter ... n ... hujus ... nate pendent peculiares loculi, ... semina ... c ... ; ... Sunt itaque capsulæ, à pedunculo A pendentes, gemmis quasi ... s & ... , ... , concavæ, & carinatæ, exertantur, hæque in ... ta quasi ... rum ... nantur, & ... ne inde a ... culo pendentia, spicam, quasi pin- ...



buſdam gramineis ſpicis contemplari licet

eddatur, tubæ autem *B*, à primordiis deorſum
C, ſurſum attolluntur, & portiones loculorum *D*, qui
natur minimis & inclusis ſeminibus

tarafco, & reliquis *cichoraceis*, 294 Fit enim uterorum
ſemine ſingula decidunt, ventoque rapiuntur. Conſta
loculo *A*, ſemen cuſtodiente, quod externùs ſtriatum eſt, & ſp
communi centro, radiorum inſtar, gracles pili *D* erumpunt,
ices *C*, ſpinarum inſtar, hærent. In *cnara* & pleriſque ſu
bus ſemen *C*
cuſtoditur, & dum vento rapitur, diſpergitur.

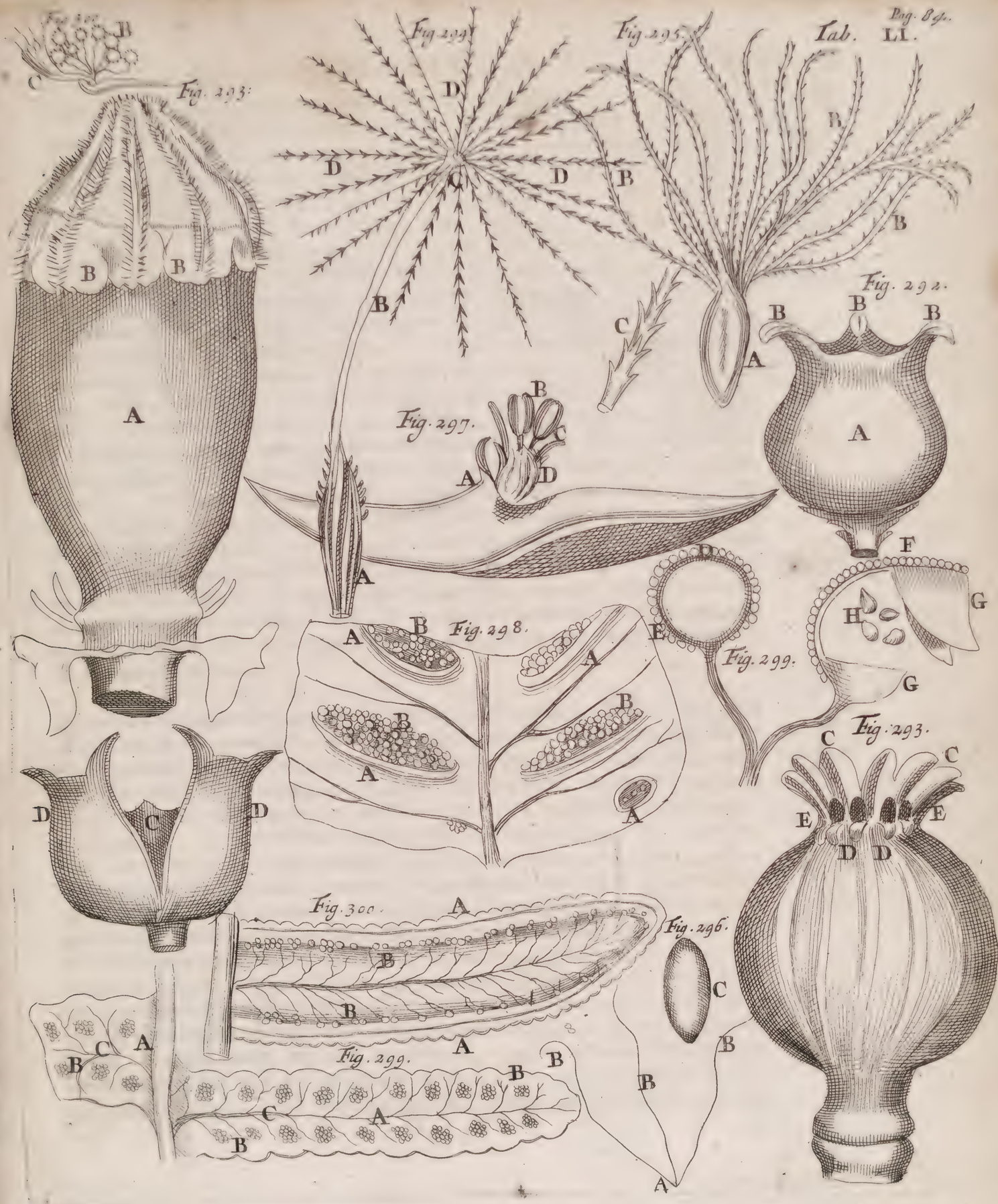


Fig. 293.
Fig. 294.
Fig. 295.
Fig. 292.
Fig. 297.
Fig. 298.
Fig. 299.
Fig. 293.
Fig. 300.
Fig. 296.
Fig. 299.

Hucusque loculos, seu *Uteros*, quibus femminales plantu[illegible] bro. vel ejus analogo loco, [illegible]idere visimus: Soler autem [illegible]ra in cumbidam [illegible] [illegible] [illegible]

De Uteri tum Augmento & formis

in Fœmina acc[illegible] Uteri substantia contento sanguine ita tumet, ut soliteam crassitie[illegible] [illegible]us corpore obvelatur, quod plerumque carnagineum est, [illegible], in aliis autem osseam substantiam sortitur, [illegible] [illegible]lis dilatæ sub horizontali plano, per[illegible] [illegible]es evidenter cernitur cum [illegible] dilatationem [illegible]res redditæ & circumfactæ, cucurbitarum carnium exstant, & reticulariter articulorum producti[illegible], feminum fecundas, ad quas derivandi, hi mactando fovent.

Affusum itaque pericarpium pluribus Uteris concretum fortasse succum contento fœtui subministrat, vel fatem externi caloris vim obtu[illegible] tabescat. In quibusdam autem pericarpium interiùs locatur; [illegible] Quoniam tamen [illegible] [illegible], [illegible] [illegible] pedolo, & secundinis excernu, pericarpia verò succum tutari [illegible]s, quam componere.

Allata insuper sufficienter evincunt, pericarpia succum, sois utricu[illegible] maturum reddi, non ita exigente peculiarem hujusmodi Naturâ, [illegible] & externorum actione talem heri fatum, qu[illegible] aliquibus gra- [illegible] [illegible] [illegible]

Fig. 301.

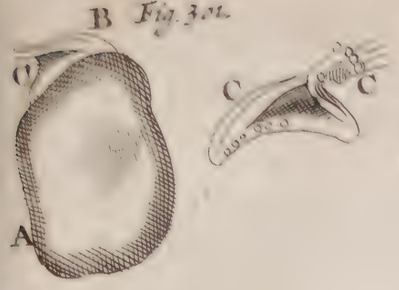


Fig. 302.

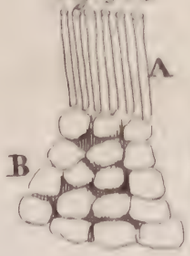


Fig. 303.

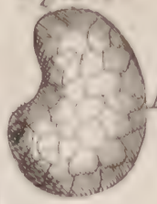


Fig. 304.

Fig. 305.

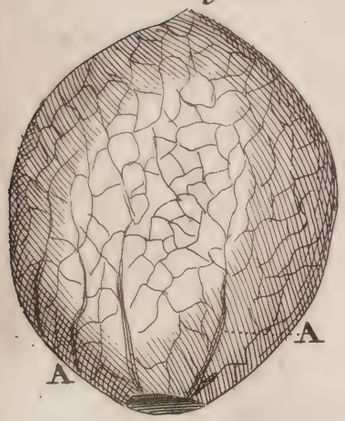


Fig. 306.

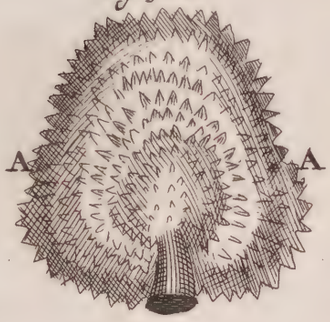
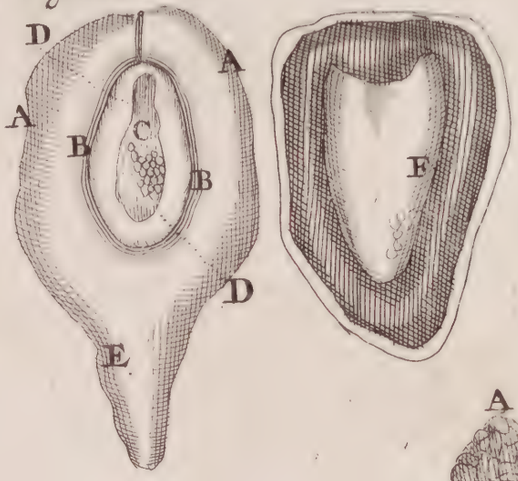


Fig. 307.



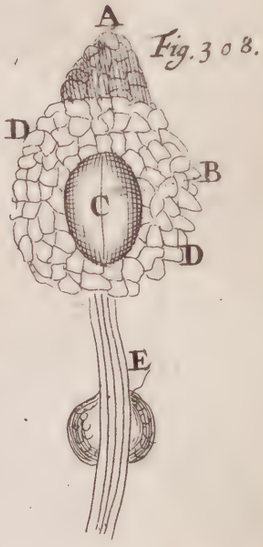


Fig. 308.

Fig. 309.

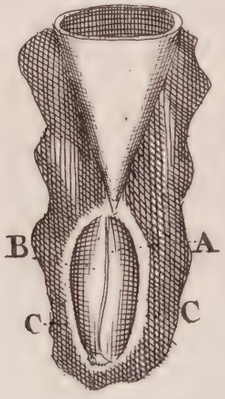


Fig. 310

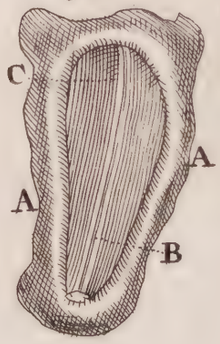


Fig. 312.

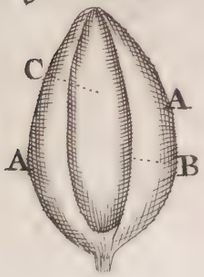


Fig. 313.

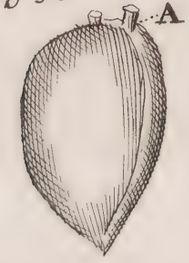
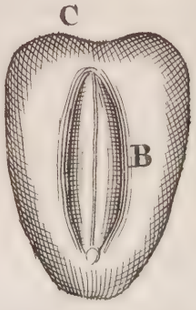


Fig. 311.



DE SECUNDINIS, ET CONTENTO PLANTARUM FŒTU.

[illegible] luxuriat, ut copiosa semina in lucem prodeant. Hæc, ve[illegible] [illegible], & [illegible] [illegible] [illegible]

ultrà nucleum osseum secu[illegible]tur, quæ externas [illegible] cæcales A pro-
mit, internus verò per longi[illegible] fibris ligneis, reticulariter im[illegible]r, pervaditur,
quibus utriculorum ordines ap[illegible]

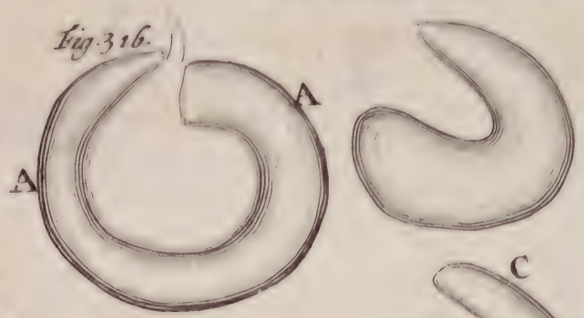
[illegible]ata, locatur, fœminalem plantulam custodiens
[illegible]ræa, Hyacintho Mathioli, & Ginestæ 306, secundina externas pl[illegible]
[illegible] A, [illegible] spinæ, seu sphones, [illegible]
[illegible] & [illegible]rpus, quod
quasi cerebrinhana nectitur, & aquâ solvitur, unde mucilagi[illegible] efficitur
[illegible]n pl[illegible]que, ut in pira
& [illegible]me
[illegible]
[illegible]
in cujus medio fissura veluti recta linea C ap[illegible]rior ambiens portio D,
[illegible] utriculis excisata, à qua pendet clo[illegible]brosa ap[illegible]
[illegible]
[illegible]as, de more, ovali aggere C circu
cont[illegible]natur vagina D, plantulæ contra custodiens. In *cupressi*, *lenti* &
[illegible]
[illegible]olus A tenuiter nectitur, in secundinis externis conc[illegible]

Malo 312, & [illegible]
lucro A custoditur, q[illegible]
[illegible]volucro C. Sub tenera secundinæ fibras admittit
[illegible]volucrum carnosum, & quasi virgeum, ex toto [illegible]
[illegible]h osseum quasi filiatæ tragmentum A emittet peri[illegible]

[illegible], [illegible]eris plantula, custoditur, & fovetur, cujus

Fig. 315.

Fig. 316.



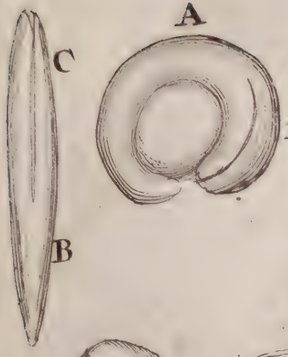
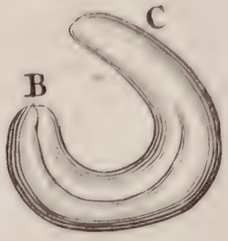
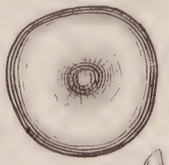


Fig. 314.





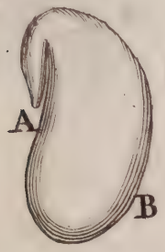
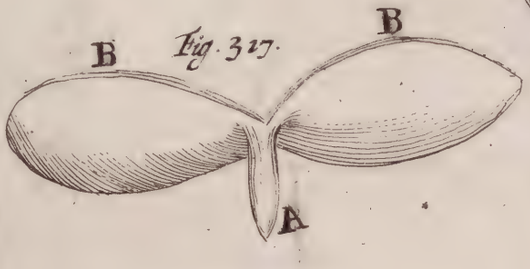


Fig. 317.



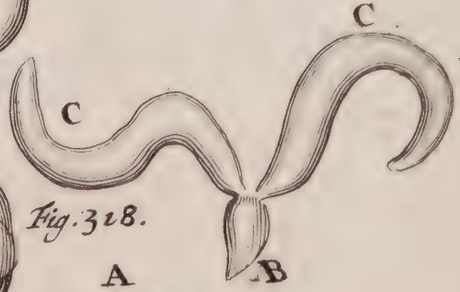


Fig. 318.

Fig. 319.

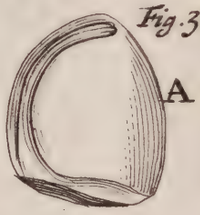
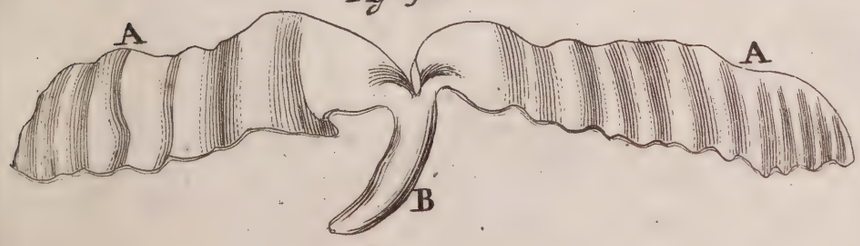
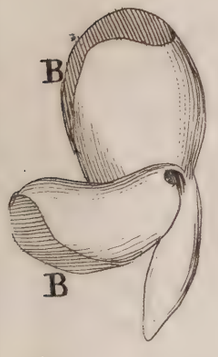


Fig. 320.





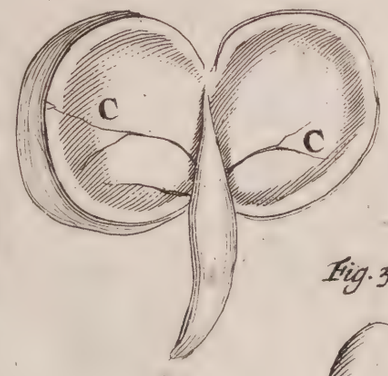


Fig. 321.

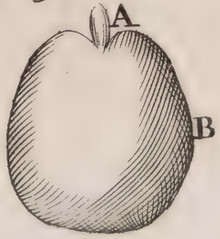


Fig. 322.

Fig. 323.

Fig. 324.

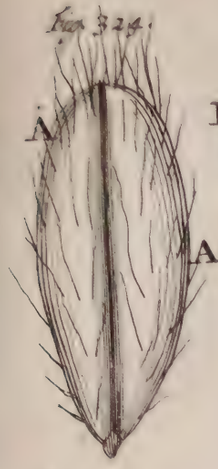
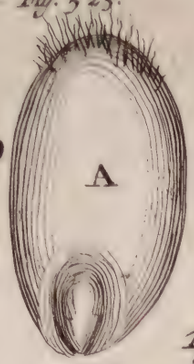


Fig. 325.



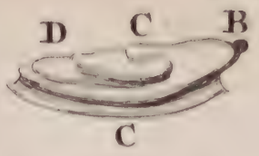


Fig. 326.

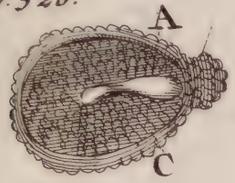


Fig. 327.

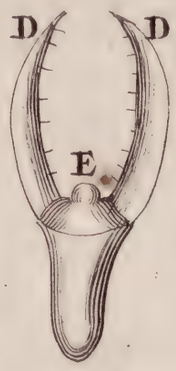


Fig. 328.

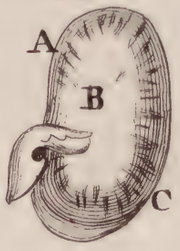


Fig. 329.

Fig. 330.

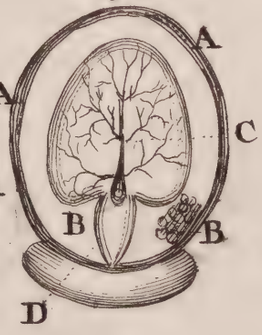


Fig. 331.

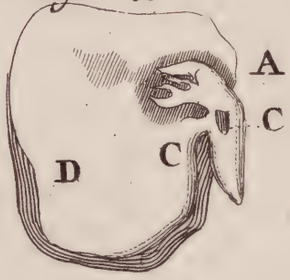


Fig. 332.

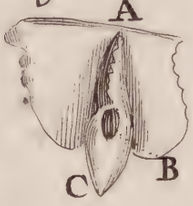


Fig. 333.

Fig. 334.

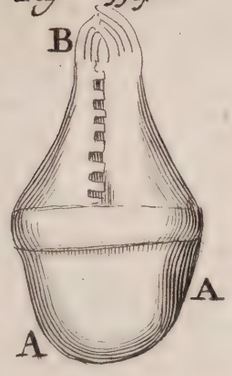


Fig. 335.

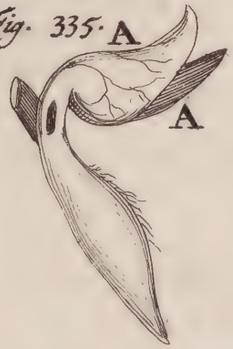


Fig. 336.

folus *B*, & crumpente radice *C*. In *calendula*, *cotula*, *m*

exhibet fac , ; ſpecioſæ plantuæ forma

A, caudici & radici *B* appenſa. *Pomorum*, *pyrorum*, *ſerulæ*, *perſo* ce *malvæ*, *amygdalæ*, & *ceraſorum* ces forma po tamen ucis trunco *A* munitur, & gemina craſſa amplaque patent foſſ tuique legumi , & ccipuè in *fabu*, *lupinu*, & quantul tulæ forma ; , & , *A*, trunco & continuatæ

A , & rum luxuriabat; aderat autem intra eundem in cujus auctionem primò conſpiraverat N Ex hoc manu credidi, frumenti & conſimilium nico poſſere folio, cui gemma cum caulicul. inchoamento, & ra pus, ſeu ſeminis caro, in ovale & o n ſ u re currentem exhibet foveam; nam eſt velut craſſa reflexis, & convolutis, cornis lumi

s pericarp us *B* com quod poſteriorem partem an

foli. *C*, occurrunt. In aliquibus ſeminibus plantula hæc od foliorum apparatu carent; ita in *capis ſativa*, *moly montano*, pa, *aſparago*, *lilio*, *ero*, & *gladiolo* 326

De Germinatione & contenta Plantarum Ecctic.

accidit, cujus plantula *A* cylindri in ſtar efformatur, capitulo *B* interdum parum turgente; hæc ſecta, quaſi tot in lucris, loco gemmæ ſeu tonorum, coagmentari videtur. Cui [illegible] luxur[illegible]

[illegible] ſas mu[illegible] p[illegible]mite foliola duodecim gracilia *D*, quæ geminante [illegible] aſſurgit gemma *E*.

[illegible] profequuti ſumus, prout nobis veræ plantulæ ſpecies exhibetur, in aliqu[illegible] evidentior, in aliis obſcurior. [illegible] lateribus reticul[illegible]es p[illegible]manante; unde fit, de more, mutua anaſtomoſ[illegible]gui in caulículum & conſutaram radicem *I* [illegible] lia hæc membranulâ, ut plurimum acidâ, quæ in [illegible] præcipue ſervatur. Perſimilis ſtructura in *catapatia* [illegible] cund na *A*, & carneis utriculis *B* circundatur, gemmaſque conſtat ſolus [illegible] coſtularum p[illegible] caulículo & [illegible] ſet principio & continuatæ ra- [illegible] *A*, *Phaſcolis*, & *curcutâ* [illegible], in [illegible] pedículi *C* expo[illegible] [illegible] laxatt in ſolium *D*, ob[illegible] Conſtat [illegible] [illegible] conico quodam corpore, quod, licet [illegible] præcipue in *amygda-* [illegible]

Fig. 330. in Caltapatia.

[illegible]

jusmodi patet in *lilio*, *asparago*, & *sativis capu*[illegible], quæ multiplici involucrorum ordine ad se invicem continen[illegible]

fig. 336. in Lilio & Sec

Sensu igitur compertum habemus, in jam expositis V[illegible]tum, plantulam [illegible]

pia sativis In Secund

[illegible] his ve[illegible] & [illegible]

In Amygdal

[illegible] tum succum [illegible] Nec sat fuit Naturæ, siphonum horizontalium o[illegible] fenestræ foramen, vel ejus loco patentem hiatum aperi[illegible] fœtus non tantùm per umbilicum nutritur, recepto [illegible] mentitio su[illegible] commixto, sed per os, derivato scilicet [illegible] fontis v[illegible] cavam, ut sensim instituatur hæc alimenti via, q[illegible]

[illegible] videtur: Et quoniam hiatus in *pomis*, *pyris* & sim. fenest[illegible] & sim. excitantur, sub quibus extremum corticis corporis, [illegible] condantur, & eisdem exterum ministratur alimentum, ut reg[illegible] & [illegible]

MARCELLI MALPIGHII

PHILOSOPHI ET MEDICI BONONIENSIS

E

REGIA SOCIETATE

ANATOMES PLANTARUM

PARS ALTERA.

REGIÆ SOCIETATI,

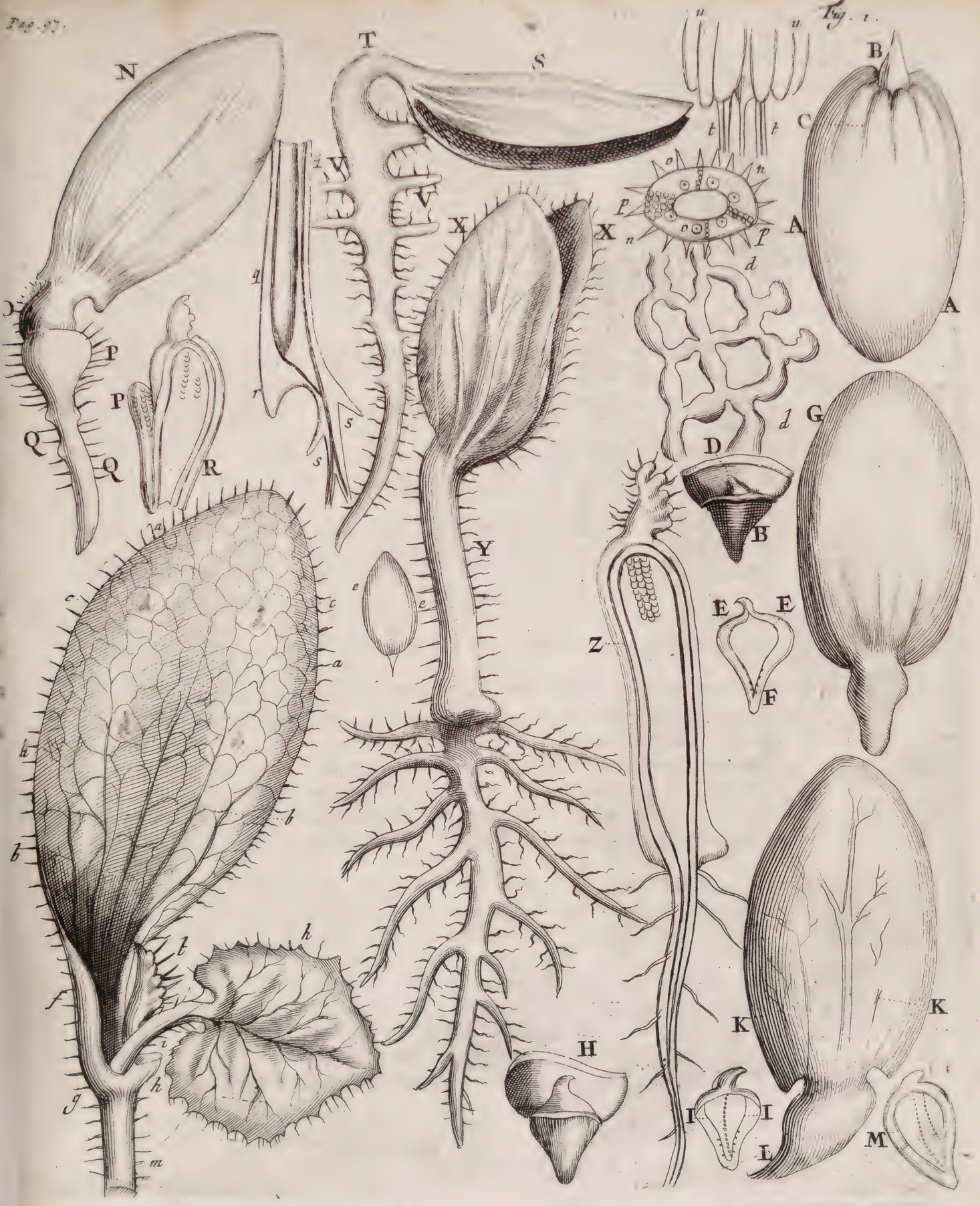
LONDINI

Ad Scientiam Naturalem promovendam institutæ, Dicata.

PRÆFATIO AD LECTOREM.

Prodiisse Anatomes Partium Clarissimi Malpighii PARTI PRIMÆ, mediante me, ut vota studiosi Lectoris, subjungimus ejusdem PARTEM SECUNDAM; hoc modo, in Exemplaribus servatam esse omnem, quam in Editione Londinensi, ubi tam crebra Auctoris adversæ manus tractatus, in contextu quædam mutanda (ut post Lectoris animadversionem favorabilem) occurrerunt. En itaque, Lector benevole, completum hoc Illustris Auctoris opus, opus unquam, tam eruditum, tam mirabile, tamque utile, quod vasto suo ambitu per orbem Literatum diu circumactum, fulgore suo micuit, famaque nunquam interitura decus Auctori non solum suppeditat, verum tota et una penna Prolopopœa, augmentum adjicit semper sempiternum. Tu interim, Benevole Lector, conatibus nostris, ut tui emolumenti causa adhibuimus, favere hinc nedigneris. Vale.

Fig. 1.



DE SEMINUM VEGETATIONE.

[illegible] vere in cortice herbarum, frequentemque Naturæ mirantur, & [illegible] quæ ex [illegible] rerum sollicita perpetuò exoptat; ut largo [illegible] [illegible] [illegible]

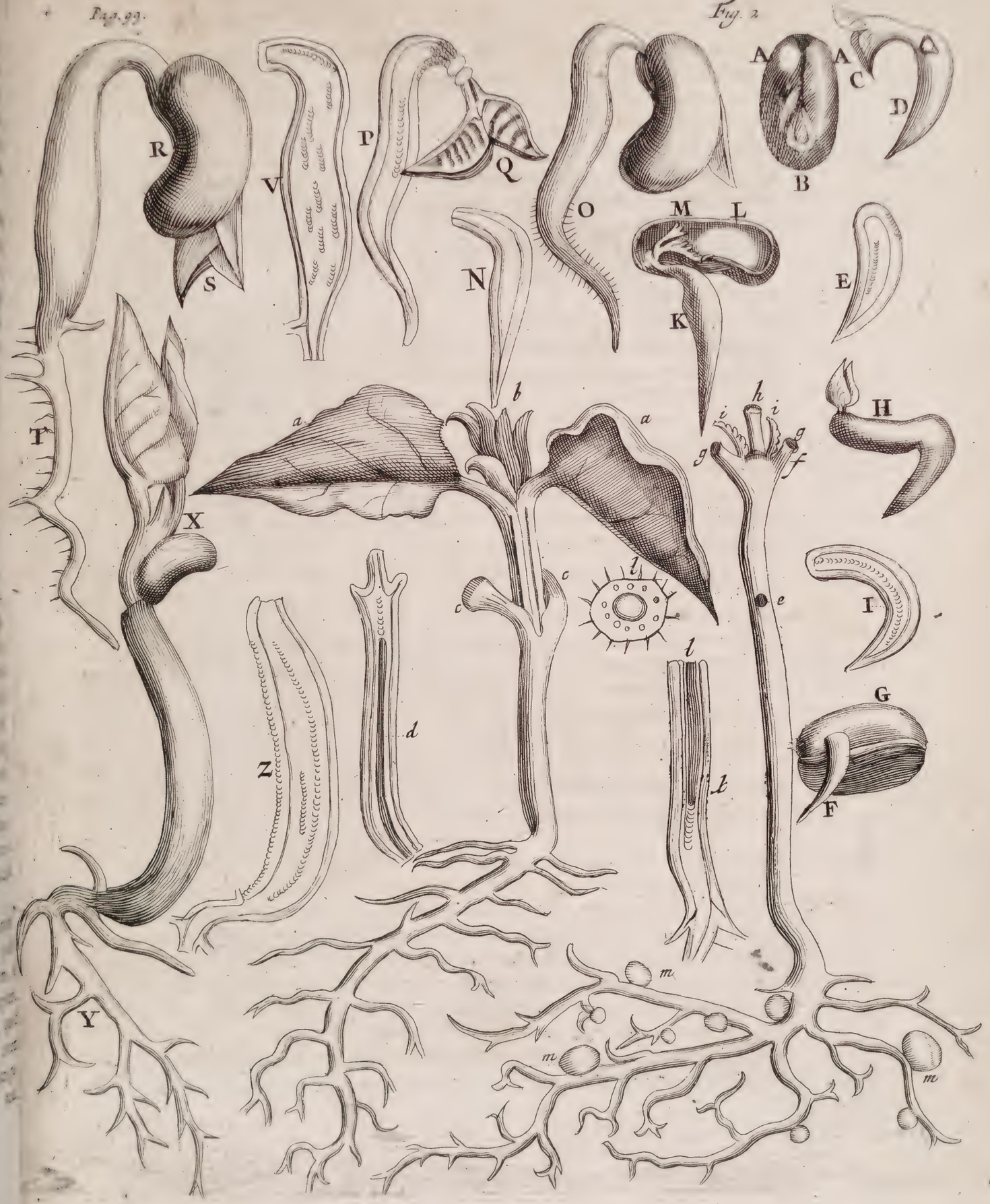
Tenuis de

Q ad

Semi ad

Nona de

Fig. 2



[illegible] caulis [illegible] in spinis horridus; hic horizont[illegible] appendix quoque cotti-
[illegible] tridiatum progressum indicavit. Tres igitur fasci[illegible]
[illegible] in ingentem foliorum magnitudinem extuberat,
[illegible] tricali cond[illegible] Ra- Triduo elapso.
[illegible]

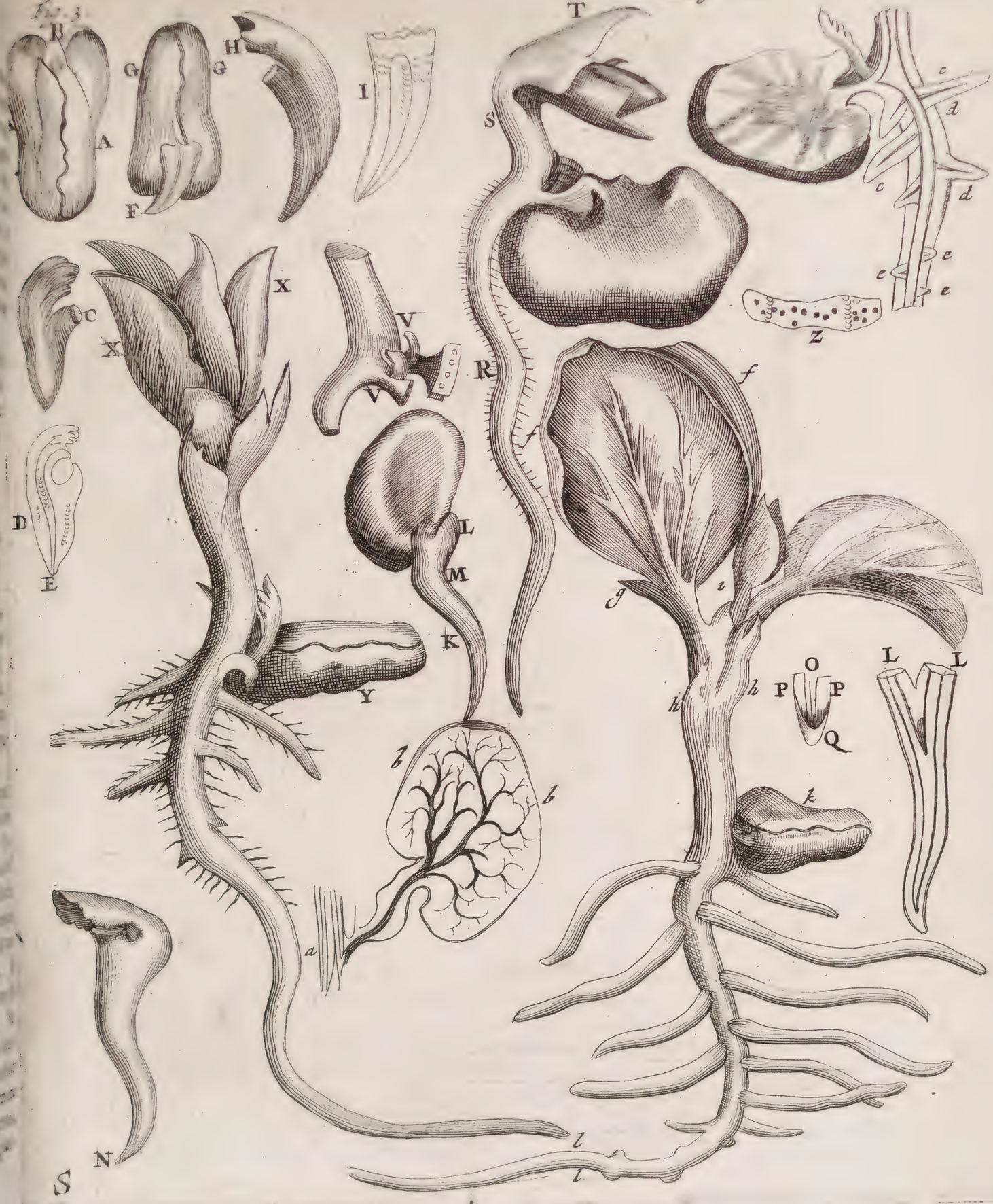
ta, tortuosam emittit radicem O, a qua radiculorum inchoamenta. & pili erumpunt. Caulis in superiori parte subl[illegible]ft, & tensim subalbus redditur. Gemina appensa seminalia folia, non parum adducta, inter[illegible]eoloria, erumpenti gemmæ l[illegible] p[illegible] Secta plantula plurimum humor[illegible]eddit; impense enim turgent c[illegible], & n[illegible]dlæ P utriculorum ordines. Caulis extremitas in gemina folia sta-
P duntur[illegible]ur; quæ etatis colli[illegible], & articulis tument. Nonâ cor[illegible]
sum erumpit caulis, deorsumque revulsæ se[illegible]c[illegible], tam[illegible]
p[illegible] & [illegible]
p[illegible], quæ [illegible], &
[illegible] & [illegible]
[illegible] & [illegible] copiosi utriculorum ordines b turgent.

Pedi[illegible]um [illegible], p[illegible], & [illegible]
[illegible], p[illegible], & [illegible],
[illegible] [illegible] & [illegible],
[illegible] & [illegible]
[illegible], & [illegible]; procedit [illegible]
fasciculis Z, qui in radices diramantur.

Cotyledo[illegible] C[illegible]
[illegible], [illegible] & [illegible]
[illegible], & [illegible] Caulis
[illegible], & [illegible]

P[illegible] [illegible]
[illegible] & [illegible]
[illegible] [illegible]
[illegible] [illegible]
[illegible]

Fig. 3.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glutinosum, & quasi resinosum reddunt humorem, q[illegible]

[illegible]

seminalis ichor à medulla effluens, extremum radicis complet.

[illegible] Circa quintam diem secundinæ molles [illegible], & friabiles, quare de facili lacerantur, [illegible] Circa quintam diem dicta.

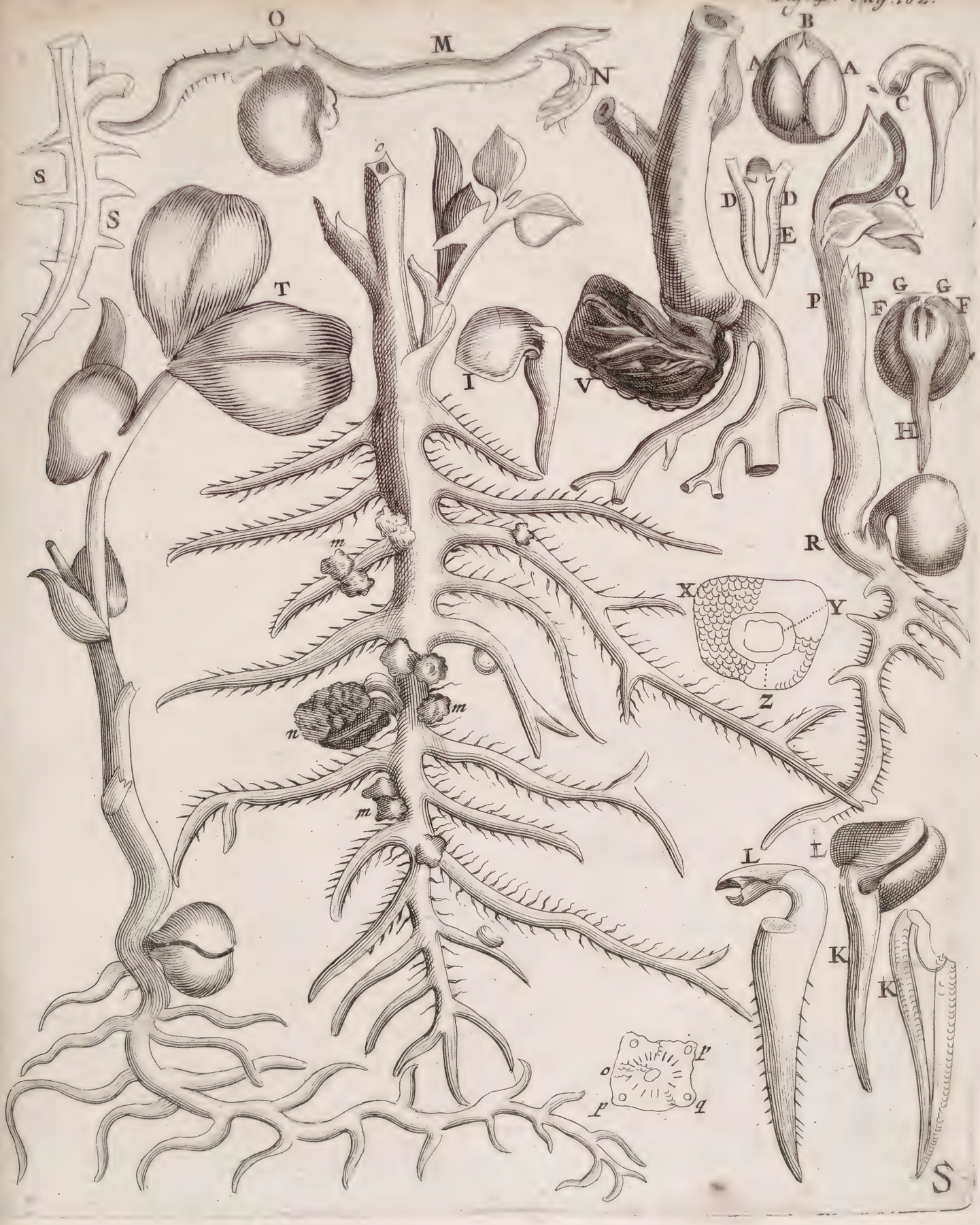
[illegible] & gemmæ [illegible], & reliqua, & teretius rore madida conservantem habent, [illegible] experimur. Caulis M sensim augetur, ejusque gemma subtusca, & auctior; [illegible] cipe. Sectâ per longum radice, fibrarum fasciculi per rectum ductu in totum pediculos & exporri-

[illegible]

eius utriculorum ordinibus perpen[illegible] terminantur, eorumque color sul[illegible] gitur, & folium T subluteum, [illegible] olim custodiens, exten[illegible] folia subtutea caulí continuant [illegible] & [illegible]

Patent autem fistulæ, & trachææ à cau[illegible] caule in pediculorum axilla, & quandoque ab [illegible] erumpunt gemmæ V su pauca coloris, mucrones, & [illegible] bos.

Post septimam diem caulis supra terram apparet, & folia X viridia sensim latiora
fiunt. Secundinæ seminalibus foliis hærent: hæc
dia, & in extremitatibus subl
lorum ordines versus p
tracticarum fasciculos Z exhibent,
p
rum quoque
corticis portio,
in minimas prodeunt radices. Caulis interea procerior red-
externis in cortice turgent, rubore fuff
Seminalia folia pedetentim adsumpto ipsorum humore,
& &
& interiùs lignosa redditur. Completo mense, perfecta jam planta,
cortice, ab interioribus prodeunt utriculis congel
crispa & arida suis pedic
tur; obtusos namque angulos
post diem
secundina a
fendit
ea B alba est, fi
&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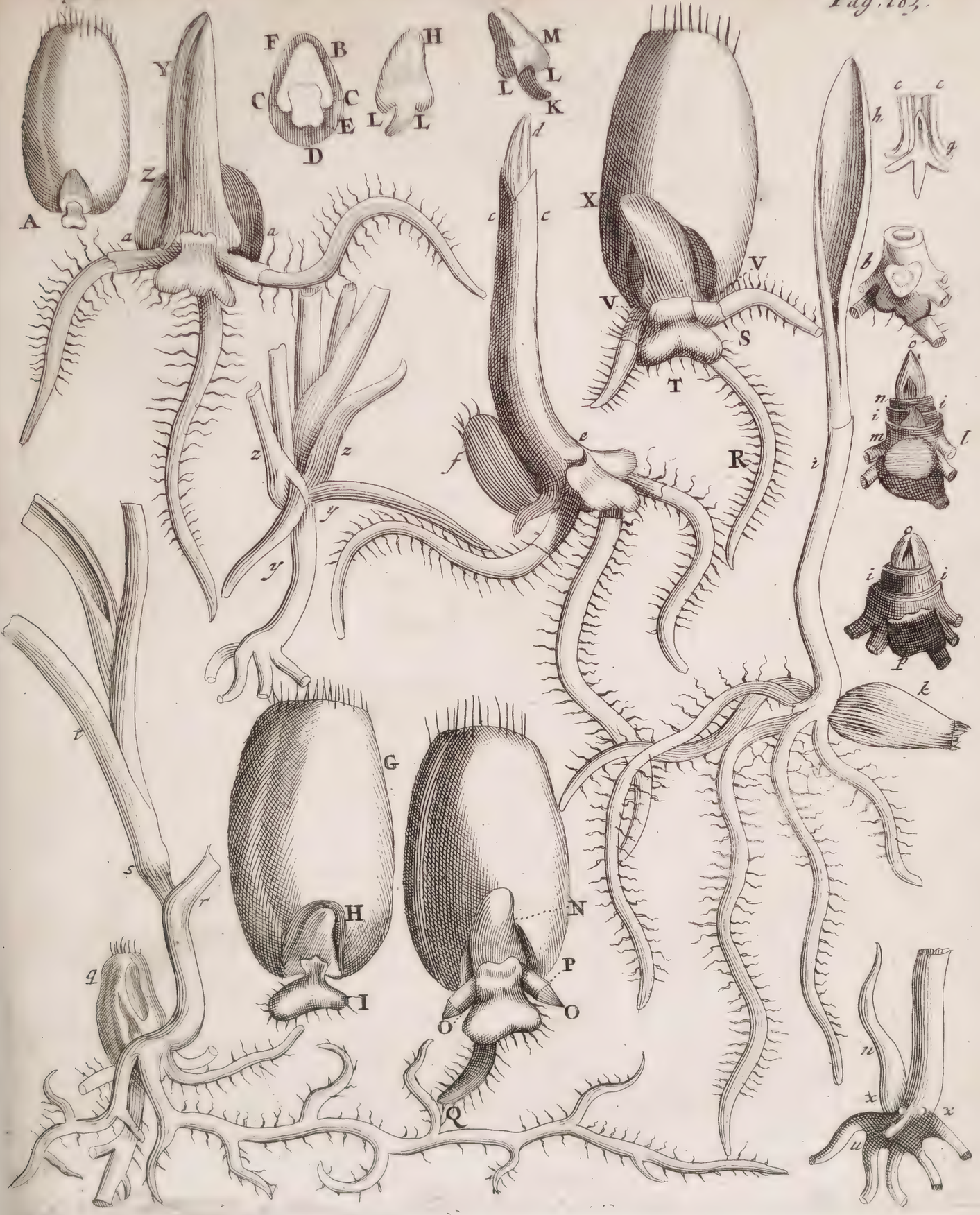
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[illegible]

táque intùs lignea portione turget.

[illegible]

brantur

Septimâ completâ die, cau[illegible]uctis, & distinctis internodiis P procerior est; Septim[illegible]

[illegible]

Post nonam [illegible], & folia T expanduntur, quæ Post nonam diem.
gemina sunt. Folia seminalia adhuc vi[illegible]. Caulis totus intùs plenus est; & continuata radix [illegible]. Ità vegetat

[illegible]

nibus (ut reliquis lignis accidit) a[illegible]
nem copiosum reddens circumlocatur; in qua pet[illegible]

[illegible]

postquam fatum est; unicâ die turget, & circa [illegible]
solvitur. Plantulæ corpus A conglobato f[illegible], quod seminis caro dicitur, con[illegible]
ruum tamen, non ta[illegible] caule B, quæ sensim aperitur, & virescit; sed laterales q[illegible]iberant; & humiliora pa[illegible]
dix D conica, viridisque em[illegible]m, seu placentula E [illegible]
saxatur. Totum exa[illegible]

[illegible]

que extremitate [illegible] & sensim sursum erigitur. [illegible]
radices custodiens, utricu[illegible]didam languinem emittit; hac a[illegible]
nudata plantulæ radi[illegible]
adhuc minimæ appa[illegible]
E. táque folia & culmus conduntur. Inter radice[illegible]

appendice, M subjecto folio, aut seminis carni; quod totum mandet, & candorem servat, nec a extraneum redolet saporem

Ante triduum, fol[illegible]bat caro admixto, & [illegible]entato succo turget. Con[illegible]s N procerior factus, subalbus [illegible]P, quod arcte nectitur pan[illegible]

[illegible] tempore, in vegetioribus seminibus, & ova [illegible] copiosi pendent à toto radicum [illegible]ante, p[illegible], sensimque minores fiunt. Hujusmodi nodi, ut insertus habeb[illegible]r, recta articulorum le[illegible] [illegible]la T[illegible] & [illegible] auctior factus, perpen[illegible]

Exeunte triduo, caulis T [illegible]re horizontaliter seminco [illegible], in longius prorumpit [illegible] tumor e apparet. Appensum quoque semina[illegible]

[illegible]rum e observatur, quo culmus, ejusque folia, & [illegible]

[illegible] sextam diem, plantula, laxato stabili folio b, attollitur, hæc [illegible] exterior namque portio, quo seminis, seu grani extima pars exc[illegible] [illegible] ficali nodo [illegible]

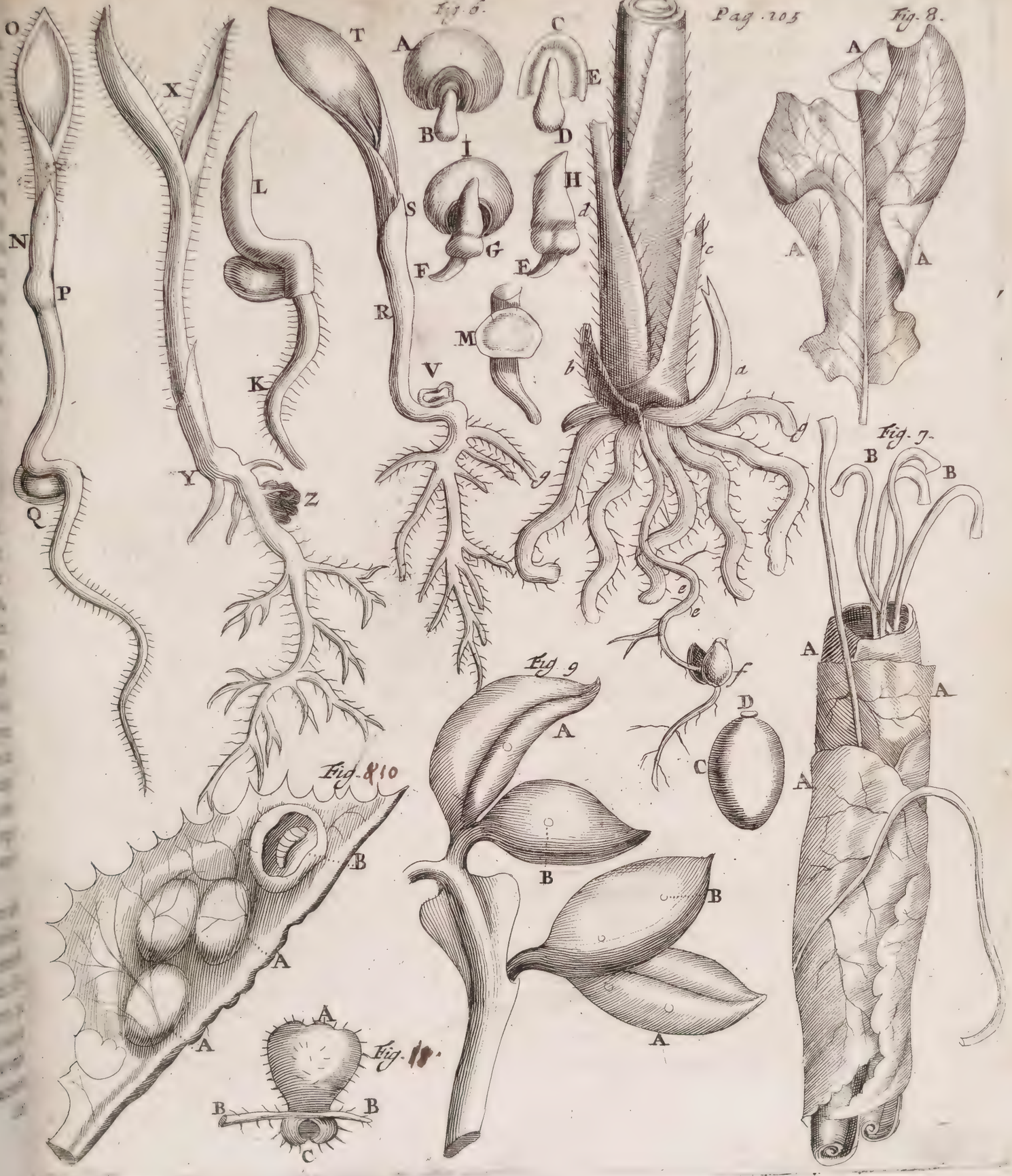
Fig. 6.
Fig. 8.
Fig. 7.
Fig. 9
Fig. 10
Fig. 11.
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mula 6.

Pandect. lib. 1. tit.

Elpso

primo nodo erumpentes, manifestantur, minimique tumores & eminentiæ, qui tandem

fus pleno, & candido assurgit. Supra radices ab co-

seu soboles κ, propriis custodiæ foliis, enascuntur; &

ostenditur, conglobatum scilicet folium

A exterùs

B detegitur umbilicus

radice D continet, quæ placentula

bitur; caule E

, quasi vaginâ, custoditum. Alteri

completâ die, &

moras; radix F subvitellina, lacerată placentulă

decoctor redditur, & continuatum seminale folium I adhuc solidum manet

adhuc

[illegible]

puis, elongatur.

[illegible]

vaginale folium S emergit, quod femina conta[illegible]
vinde T cum reliquo caule erumpit. Semenque folium V cripu[illegible]

[illegible]

contabescer[illegible]s radicem S.

Hæc, & [illegible] in passim in reliquis p[illegible]m seminibus, seu ovis, dum fovencet[illegible] orum expo[illegible] vegetationem, & [illegible]los namque humores, & menstrua, cor[illegible] terrenumque uterum varia mater[illegible], & fossilibus [illegible] femini ala eluceferet, nobisque aperiret, quodnam sit[illegible], & tubulis [illegible] ovum transfluum, plantulæ[illegible], & Phaseolorum semina Ap[illegible] [illegible] ostreas intus voles, & mutationes in seminibus subsequutas observare tentavi. Prim[illegible] trum solutum erat, fabmolina erant, [illegible] exal[illegible] [illegible] [illegible] [

mum molem minuebat. Ex fale armeniaco fatur
Aqua quoque cervino cornu
ffectebatur. I te; adaĉtaque pa-
que macerata axivio, & calce, tranfac
lie, plantarum fupra terram ex gentem deducere. Quæ lixivio, & anti- bus macera-
, ufque ad vigefimam quartam die protractâ germi
em femina utro foluto mundâ, vigefimâ octavâ die
plantulam manifeftarunt

Naturam
one diu durabant. Calcis vivæ ufu, præ cæteris excrefcel
x: &
fub tecto co e erant; ne pluviâ aquâ irrorarentur: & bu boſæ nunquam
ræ funt
quam & quæ in aperto cœlo eodem tempore terrâ
ufi condita
Circa finem Auguſti lactucæ femen in aqua
li; deinde in aprico quo-
dam colle fevi. Hujus itaque vegetatio pro ta eſt, præter morem, ufque ad

decimum diem. Item semen non alteratum, terræ tamen commissum, eâdem ammonii aqua humectatum, citius [illegible] plantula tamen gracilis, pallidaque [illegible] superabant [illegible] rum semina [illegible] transactâ die, aqua fœtentissima erat; conclusaque semina corrupta, absque vegetatione. Phaseoli ova putrefacta, farinaceaque [illegible] & pienda accipiunt. Eandem partem obs[illegible] [illegible] olia appellat [illegible], & auctio promovetur. [illegible]

rentamina, à me sæpius repetita. Primo itaque vere, Fabarum primas plantulas [illegible] detractis primis cotyledonibus, seu ta[illegible] ; reliquis corruptis, parum veget[illegible] ima licet cotyledonis exceverat, [illegible] à hærente comâ radice. [illegible]

tum omnino erat experta. Menſe [illegible] ſimiles plantulas Fabarum, & Phaſeolorum, ablatis pariter binis ſe[illegible] bus, ncubandas poſui; è quibus unica Fabæ plantula v[illegible]; elatâ ſupra terram m[illegible] & Phaſeolorum; qui inſigni polient trunco, & gemma [illegible] vabatur [illegible] rum, [illegible] incrementum; poſt menſem contabuerunt: reliquæ verò long[illegible] minores perdur[illegible] m[illegible].

Ex his igitur conjectari licet, pla[illegible] ova, è materno ovario delapſa, ulterio[illegible] rem exigentia fotum, & [illegible] n ventorum miniſterio, vel hominum indoſtriâ [illegible]

locat : plerumque enim ascendente caule att[illegible]ra, ut in Ph[illegible]colis & Cu[illegible]a, interdum rad[illegible]ibus hærent, tetráque[illegible], [illegible]a, [illegible]a, [illegible]a,

DE
GALLIS.

admittat: ità ut vitæ chorea continuato introitu,

men generationis ipsarum methodo, & perenni animal
but Gallæ hoc nomine abusive utı: usurpatâ hujus nomei

fabulosè, & supertitiosè de hujusm centiis prolata fuêre: morbosas hasce affectiones, & emergentes inde cun rum partibus; animantium ter exarando, fustrabimus: ut inde um exortus, & historia, aque, quibu

Evonymi folia ætate innumeris fere ovis c emergunt; & horum contacta non parum tolerum c

In foliis Quercûs. dam solius *Quercûs* vere, & ætate in hum que tissimæ observantur cicatrices, seu cancellatæ, & arctactæ i nullo magnitudinem parum excedent haerent gemmæ, & muscarum subtilrea ova, quorum hal ia subjectæ partes contabesc arundo matasmo afficitur. *Pomorum* pariter folia, sicut

tandem cubicam [illegible]

[illegible] utriculorum ferietibus, craſſior redditur, & decolor. In alte-

[illegible] extra erumpat.

[illegible] evolant

[illegible] quædam innumeris ferè tuberculis laborant, quæ subr[illegible] ab humiliori, ſuperiorſve ſolii parte eminent: tali

[illegible] conspersa ovis, in minima curvantur tubercula; nullo servato ordine, vel dispositione; [illegible] inter plura [illegible]

In Opio-

[illegible] activitatem; reliqui verò, hunc præcipuè vere progenit, [illegible] exc[illegible] [illegible] ius protube[illegible] [illegible] & quando [illegible] latitudo in concameronem desinat, [illegible] Intùs cavernosum spatium innumeris quasi anfractibus repletur, quæ interdum [illegible] parant

de [illegible] [illegible] & [illegible] & [illegible] [illegible] & [illegible] [illegible] & [illegible]

Fig. 12.

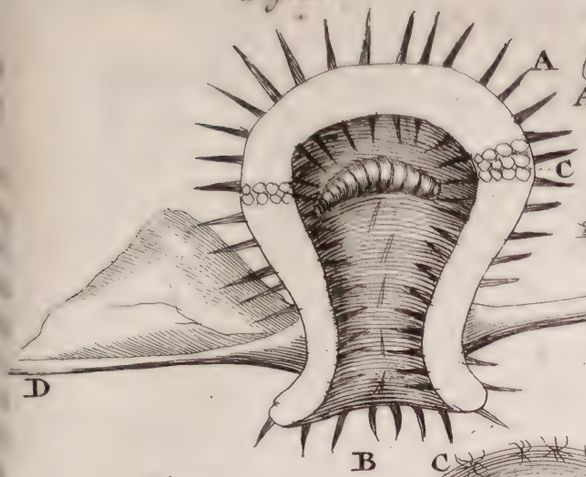


Fig. 13.

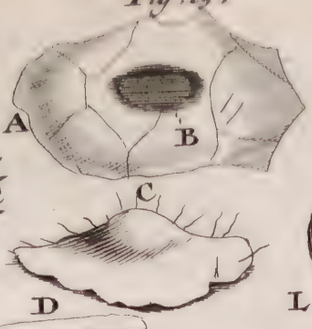
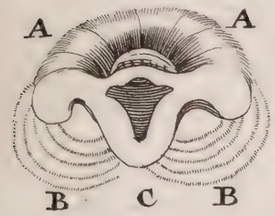
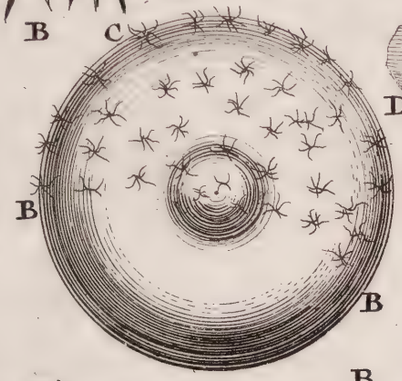
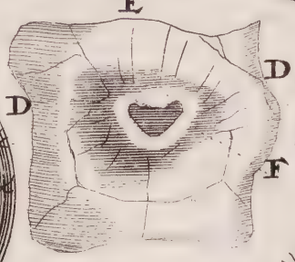


Fig. 16.







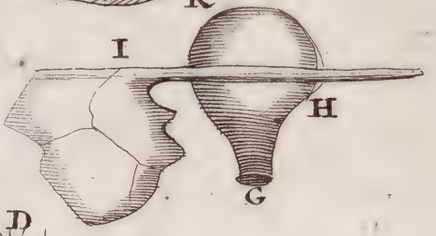


Fig. 15.

Fig. 14.

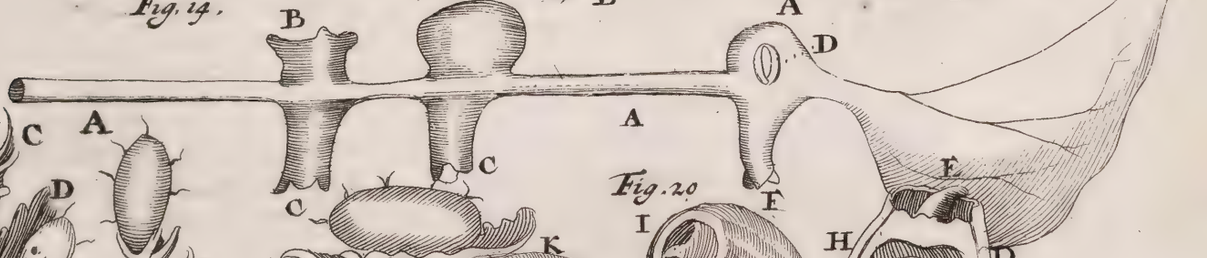
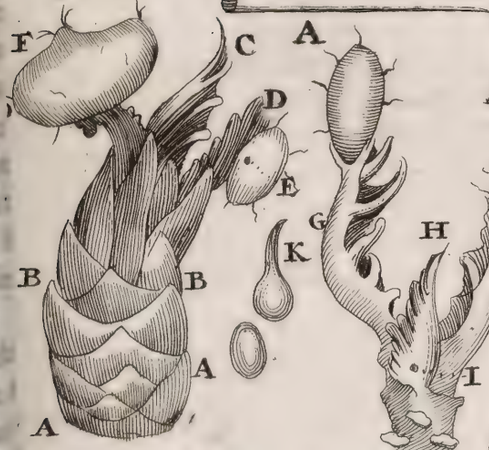


Fig. 17.



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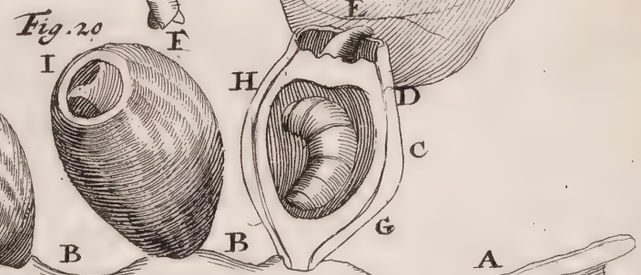

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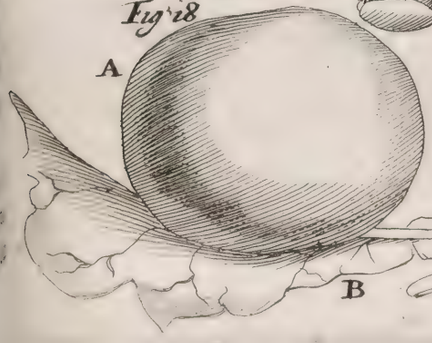

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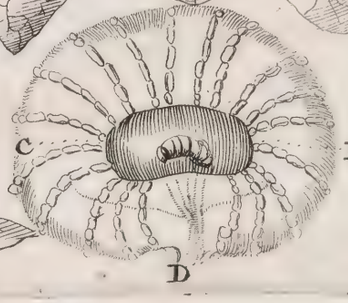

A[illegible] observantur erumpentium hujusmodi Gallarum [illegible], & formæ. [illegible] nec mirus elegans tumor est, quem, sub [illegible] intuemur ab [illegible] ction folii parte in Quercu (15.) emergentem. Buc[illegible] fig. 15. [illegible] A, cui cocxte[illegible]tur, umbe[illegible] instar, latum & gracile capitulum B, [illegible] crumpunt subvitel[illegible]nt: unico enim ex [illegible], in quoque, vel fex [illegible]tur filamenta C: in centro fœtus [illegible] D alitur, & sub umbella plures quoque ac[illegible]e, & vermes cubant.

[illegible] rvant nonnulb[illegible], C[illegible] [illegible] [illegible] [

[illegible] rubimus frequenter autem [illegible] occurrunt [illegible] vaniibus ine mationem [illegible] læve, vel eodem inficitur colore subvi[illegible] Gallæ rubicundis punctis maculatum exstat.

[illegible] concavitas vermem *H* fovebat, qui longum post tempus, [illegible] converfus, evolavit. Reliquæ Gallæ *I*, & *K* recurvo corpore constantes, à [illegible] forma parum declinabant.

[illegible] currunt [illegible] ratus minimus, candidusque vermis *C* con[illegible] rum cellula per medium excurrente. Hæc igneo exorta pediculo, [illegible] quirit, & in apice concavitate, quasi calix *B*, seu umbilicus [illegible] moles ligneis libris, & appensis articulis compaginatur; & in fui centro, con[illegible] mem *D* custo-[illegible]

[illegible] ceffibus *C* condecorata: nam deficiente alu[illegible] [illegible] alos, non rarò tentantur.

Nec

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Fig. 21

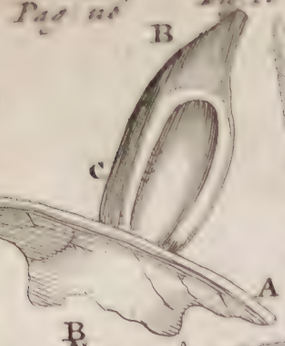


Fig. 22.

Fig. 23.

Fig. 27.

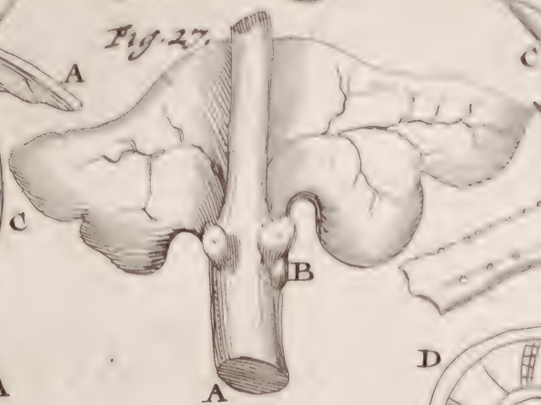


Fig. 31

Fig. 24.

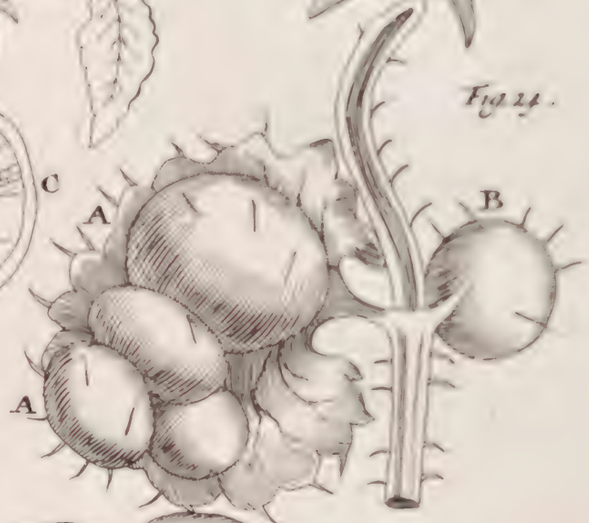


Fig. 29

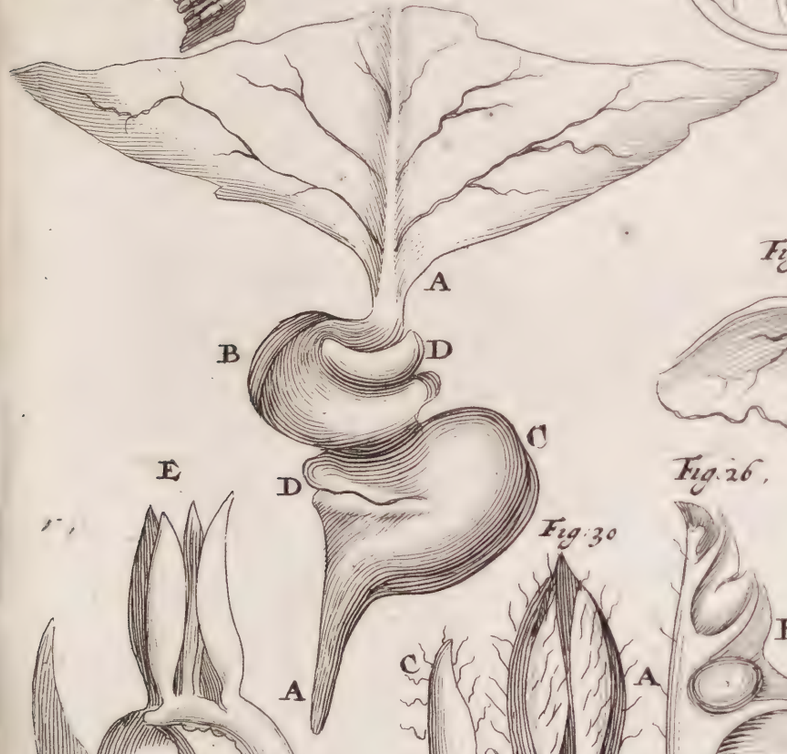
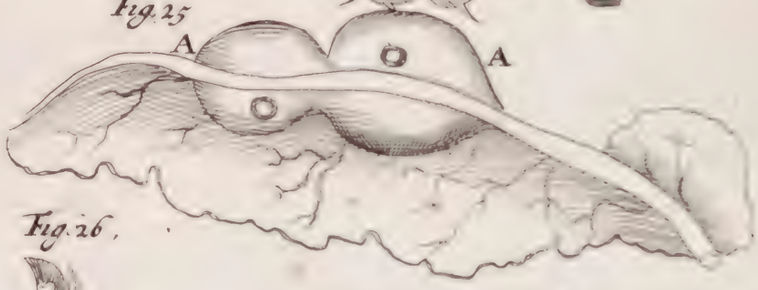


Fig. 25



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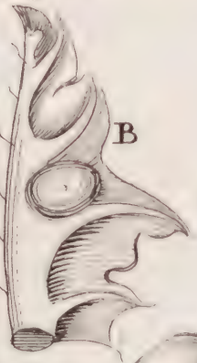
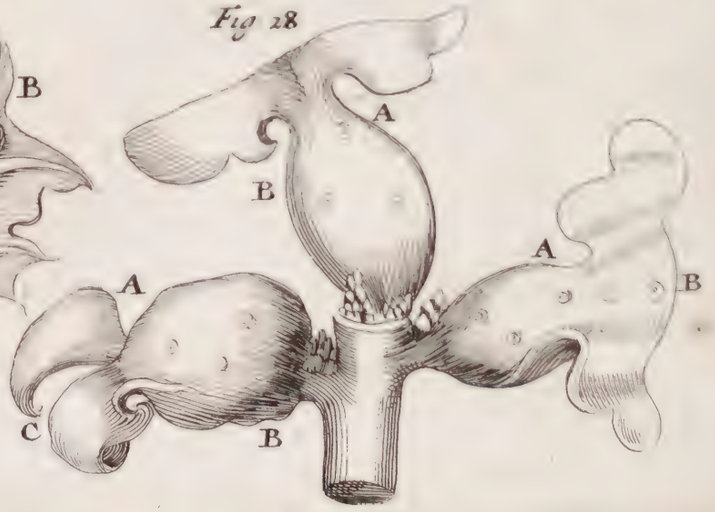
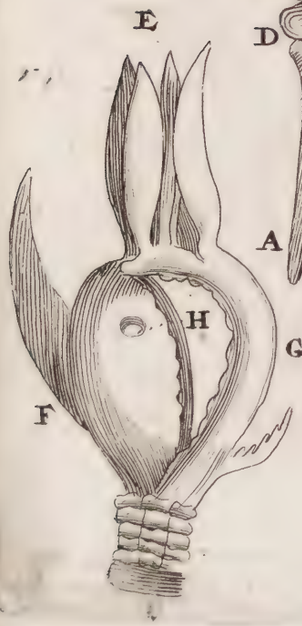


Fig. 30

Fig. 28





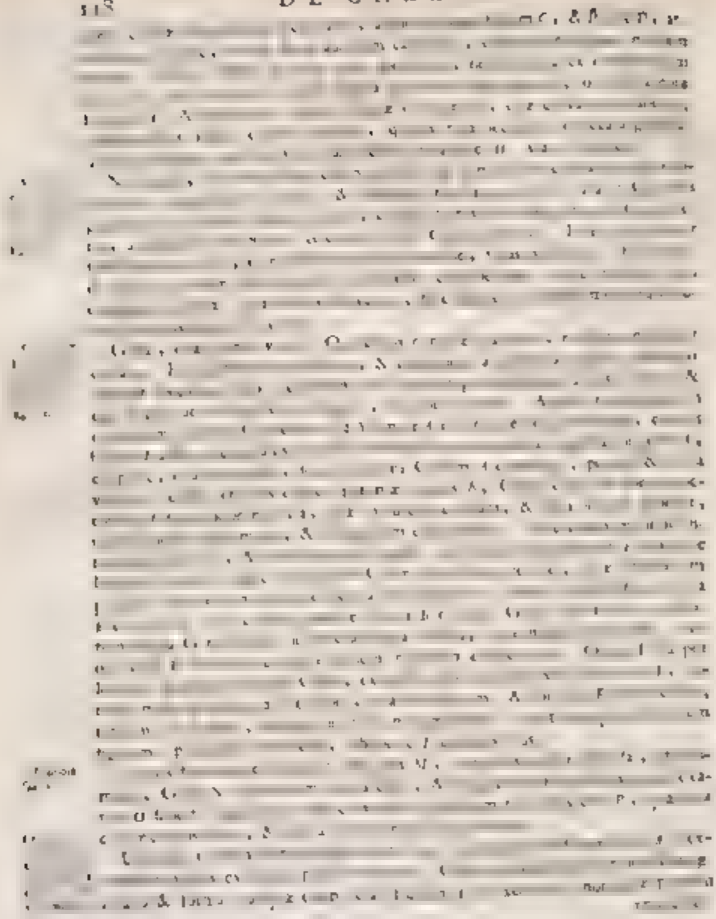
non deturbetur. [illegible] Intus pari copiosi attolluntur. Intus mirâ constant structurâ: [illegible] Galli, in peculiare animal conversus evolat: reliqui[illegible] intercepta verò spatia utriculorum tenebus occupantur, quæ [illegible] curbitæ pericarpium æmulantur.

[illegible] excitat: ità in folio Quercûs (25.) gemini tumores contigui A. [illegible] Gallæ parum a[illegible] ovo. Quercûs vegetantis.

Eadem labe coaffl[illegible] flicto vulnere immissis o[illegible] pediculo folii Quercûs (27.) mibi [illegible] frequenter tumores is exiguos cum cicatricibus, intus late[illegible] mutantur, qui tan[illegible] vidi in iisdem pedic[illegible]s fabrotundum foramen, intus vero segmenta, seu minima sterecora; [illegible] vermis, non exspectata alterius m[illegible] viam sibi facit. §. 27. An pediculo vitii quod at galix. Interdum

Frequente[illegible] pf[illegible] [illegible] formantur m[illegible] [illegible] pediculus A, [illegible] & inter os ovum reco[illegible] sos breves [illegible]

Notabile est, quod [illegible] (29.) frequenter accidit. In his [illegible] vo[illegible]er, & [illegible] [illegible] [illegible]



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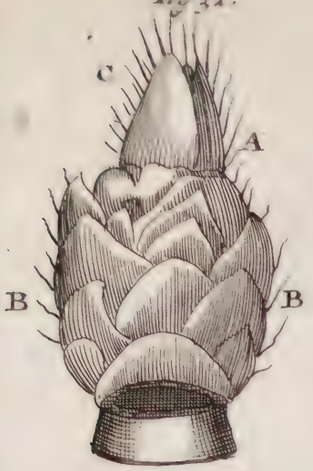
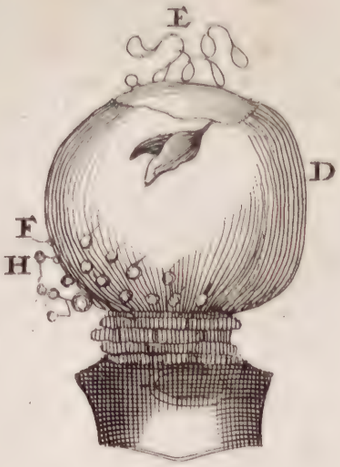




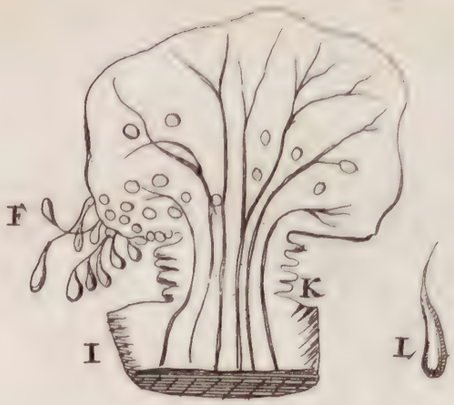
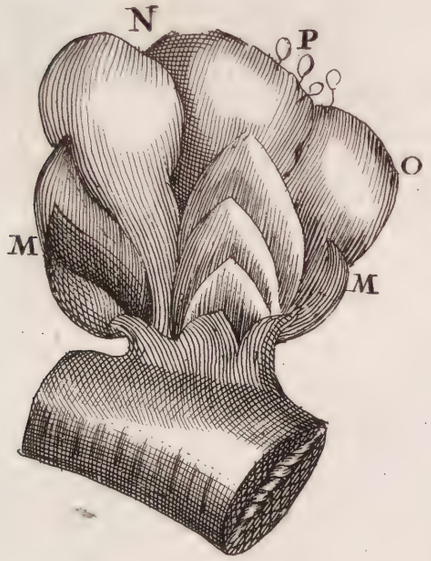
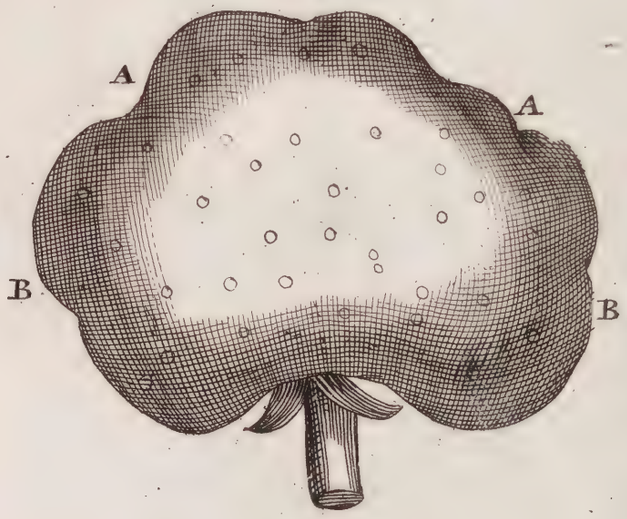


Fig: 33





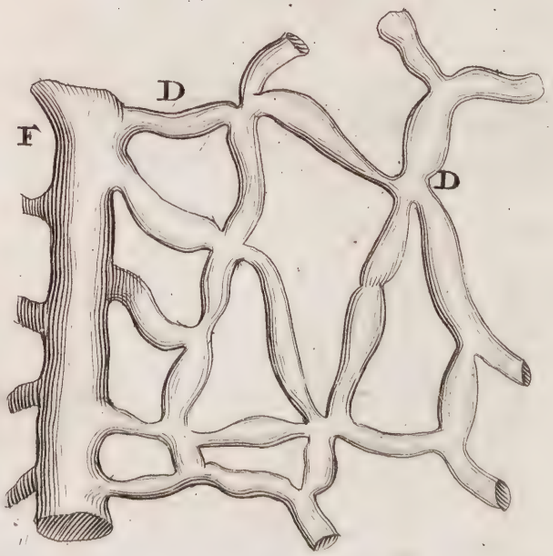


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Fig 34

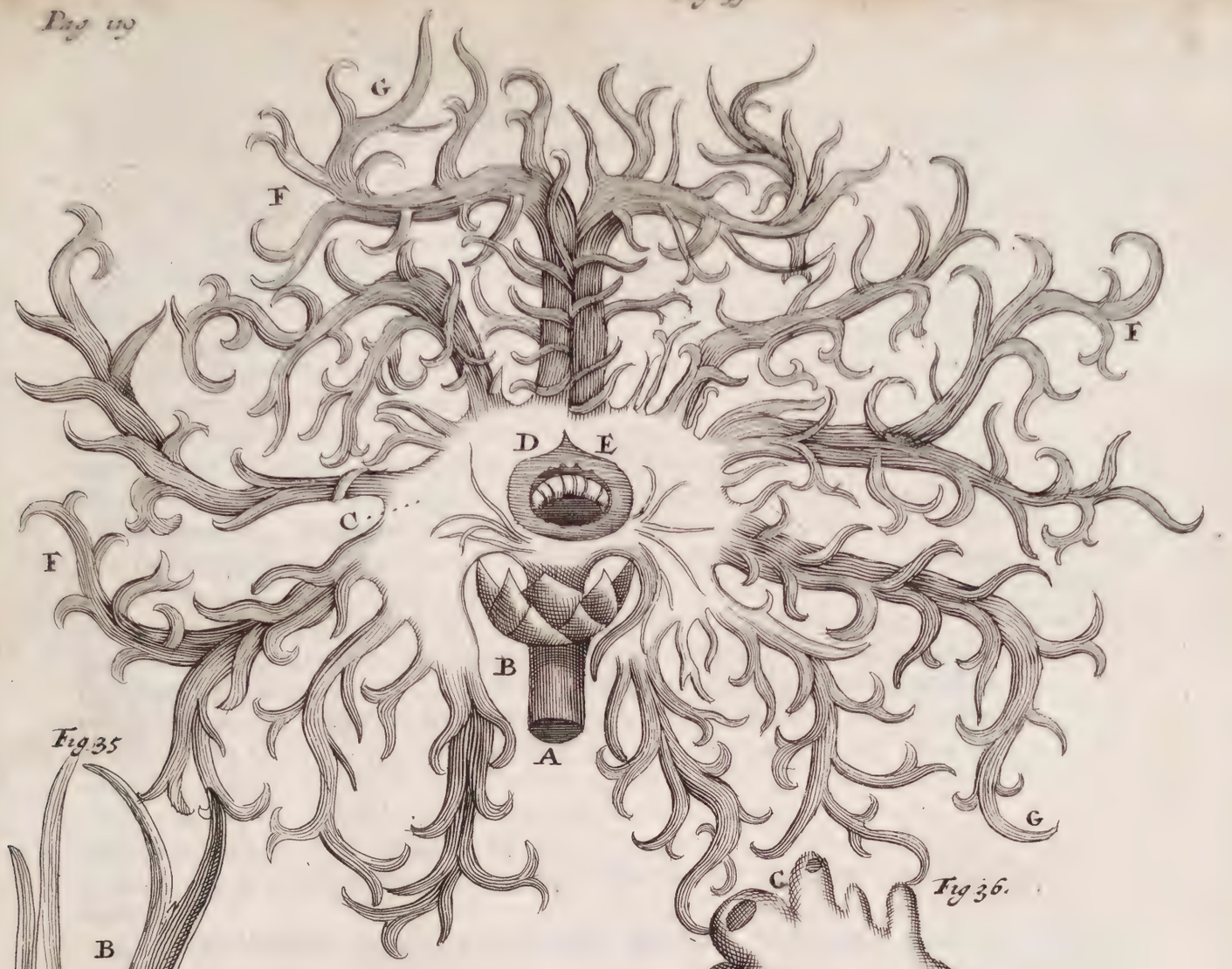
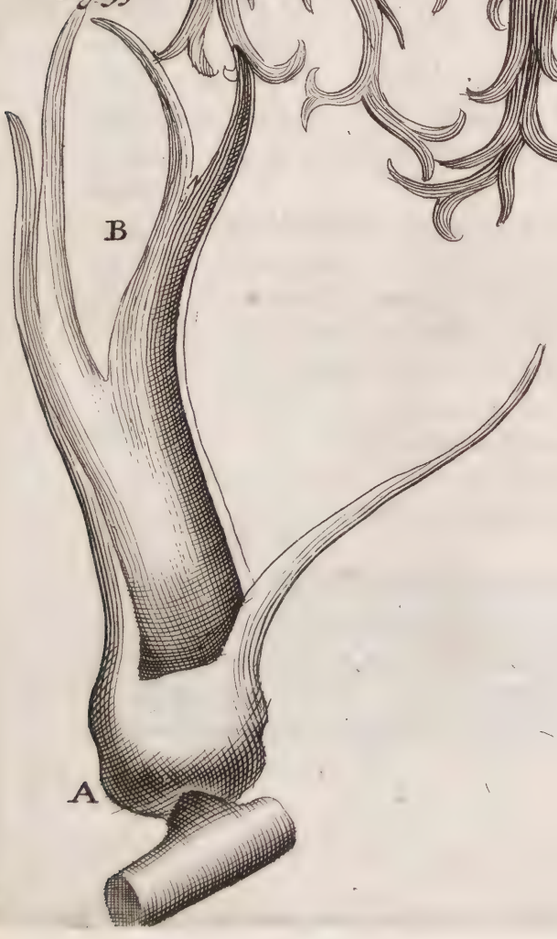


Fig 35



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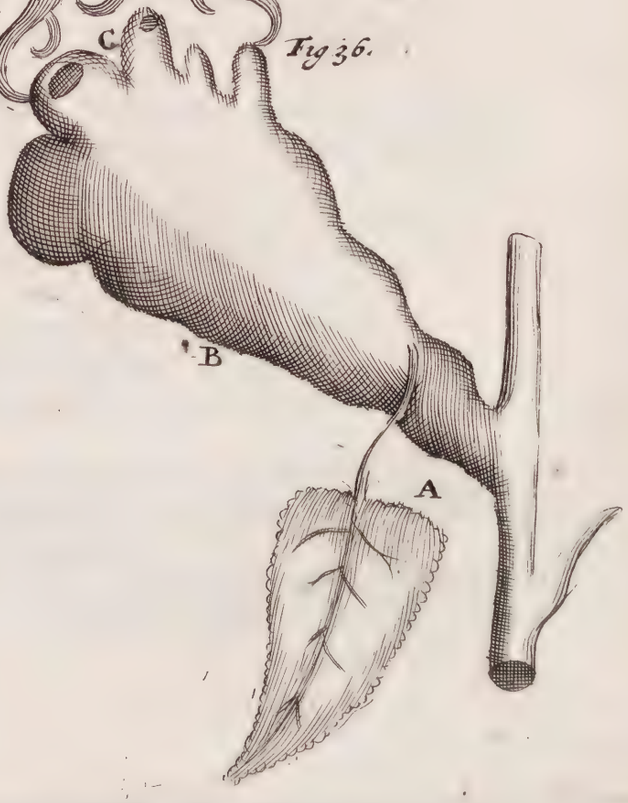


[illegible] a primo [illegible]

tacu

Quercuum gemmæ, licèt ovorum contagio afficiantur, non eâdem tamen tumoris specie tentantur; sed variè vigente vegetatione configurantur; unde in Quercu (34.) ramosam quandam Gallam, ab aliquibus capillatam dictam, passim ci [illegible] sese offert. A conglobato Gallæ c[illegible] ramulæ appendices F, qu[illegible] plurib[illegible]us fibrarum laxiculis compagin[illegible] n villos aculeatos G divid[illegible] & solvuntur, qui impulsatione lactâ, quasi comatum corpus constituunt.

In eadem pariter Quercu (35.) frequenter discussis c[illegible]ous foliolis globosum exiguæ magnitudinis corpus A excitatur, quod intus vermem alit; [illegible]

In Populo pariter (36.) interdum tota futura furcula carina A [illegible] batur vesicam B, papillares promentem a[illegible]ndices C, parentibus ortheas imit[illegible]

Hujus

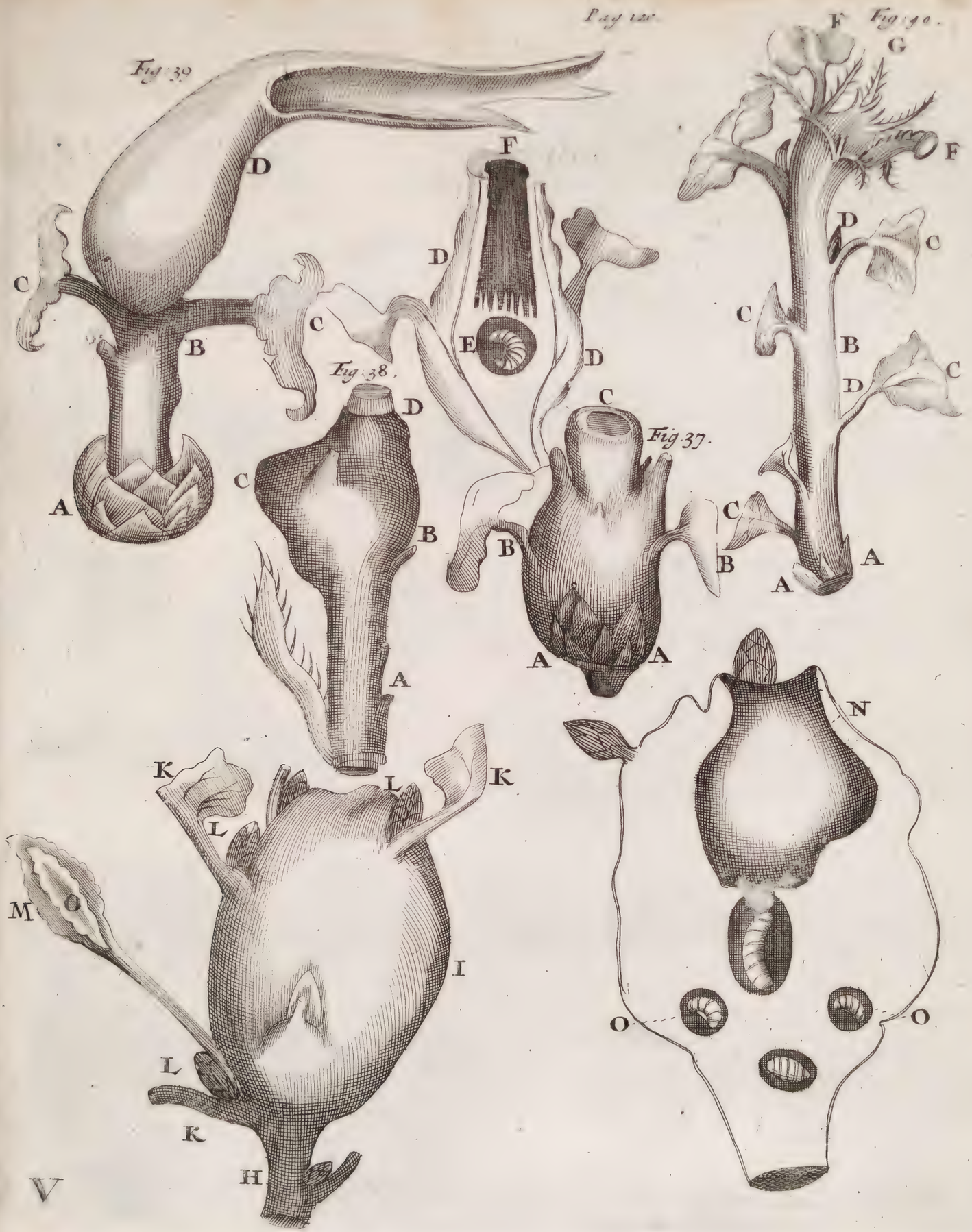
[illegible] crassum [illegible] intùs intumescit tuberibus animata.

[illegible] tuò gemmarum structura in Gallarum tumores immutata monterdum aliqualiter antiquâ [illegible] vitiata insectorum fœtibus [illegible] furculi forma. In hoc itaque per longum secto, igneæ oculos partier prod[illegible]æ, & ad apicem furculi. In superior tamen furculi portio F obliteratâ me-

[illegible] verò furculi D tandem co[illegible]

[illegible] ducar.

Recentes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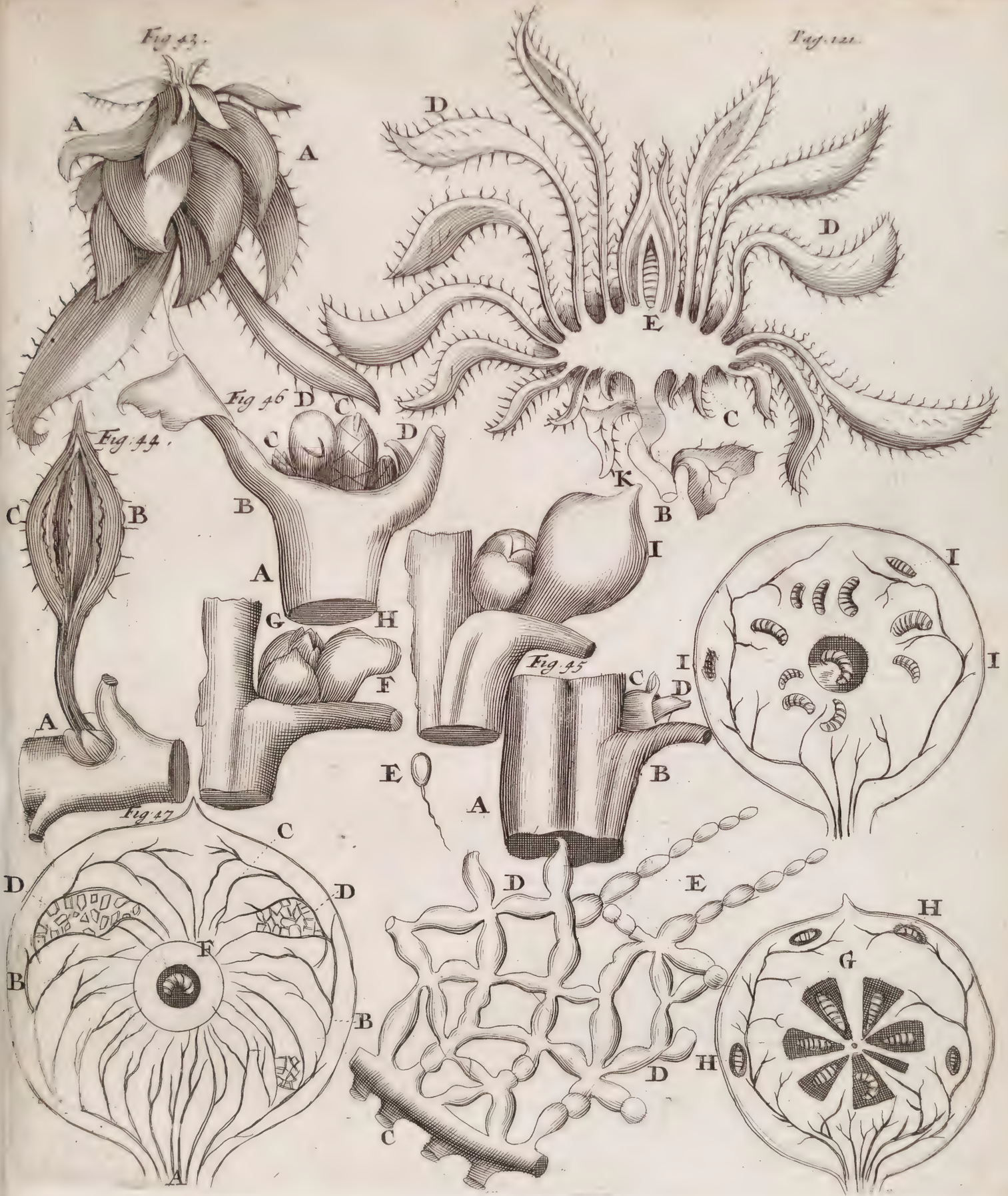
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C

foliis *A*, subrotundum primò hic corpus, quod per me[illegible] gemmæ basin *B* exhibet, foliorumque caducorum exortum *C* indicat: In cæteris namque sanis gemmis, secundum Naturam veget nubes, excrementorum foliorum exortus, & implantatio sub diversis plantis co[illegible], ita ut ellipsis, vel conus inci[illegible]cetur; in illis a[illegible]ta crate[illegible]basi *B*, ab eodem horizontali plano reliqua carinæ [illegible]lia *D* emergant. In horum [illegible]o minima eminet appendicula *E*, a ligneæ substantiæ exorta. Hæc in globola sui p[illegible]e *F* verm[illegible]unum vel alterum *G* caß interdum tamen quatuordecim vermi[illegible]s in ipsa [illegible] ma hæc, ità ut oblongior reddi[illegible], in apice laxetur, & caduca foliola *H* p[illegible] [illegible], immutato foliorum exortu, media carinæ pars [illegible]tur; & condita Galla *K* grandior re[illegible] [illegible] in singulos caducorum foliorum ordines, veget[illegible]o excrescunt; nubo erum- [illegible] & [illegible], [illegible] [illegible] [illegible]

[illegible] fonola D premit. In ce[illegible] est, in situ apicis, futuri foetali vermis luteus E continetur, qui suo hastu, & inspiratu, perturbata fucci vià morbosam hanc Gallarum effici[illegible]

[illegible]

fig. 45. quantissimè ante Julii mensem copiosæ erumpunt Gallæ [illegible] A [illegible] novello A supra folii stabilis implantationem B, minima [illegible] b hujus basi erumpit Galla in[illegible] eminet, interdum autem quasi stylus accumi[illegible]

[illegible]

fig. 46. foras viam sibi quærant.

Parem exortum fo[illegible] (, [illegible] C [illegible] Augusti initium oriuntur: Frequenter eten[illegible] ter foliorum axillas B, ubi plurimum hu[illegible], quarum basi Gallæ D exeruntur, & a prin[illegible]

[illegible] (, [illegible] hum, [illegible], lem[illegible] & [illegible] A [illegible]

[illegible] excitato opere, percurrentes ramos C, versus centrum pr[illegible] indè pericarpium fabluteum sub u[illegible] n specie D pendet [illegible] cularem exhibet contexturam: ubi verò versus centrum angustatur, [illegible]

[illegible] contentus in centro vermis in muscam conversus, mox eruptorus est [illegible] reliqui adhuc molles, & minimi jacent. Interdum diversæ speciei vermes, [illegible] devorantes, habitant. Variam quoque maturitatem acquirunt [illegible], [illegible] cubat vermiculus.

I

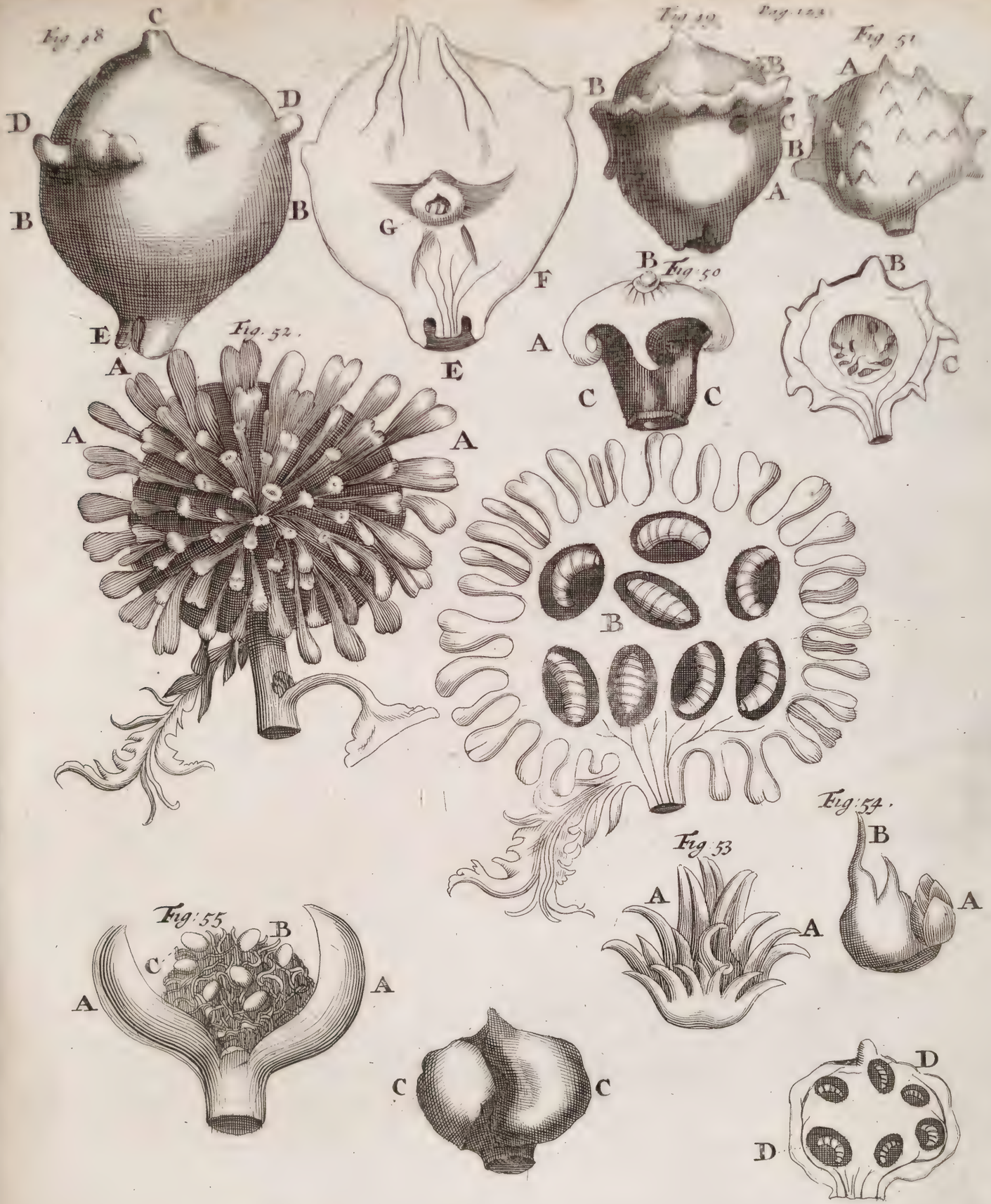
Fig. 48
C
D
D
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E
Fig. 49
B
B
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Fig. 51
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G
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Fig. 50
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Fig. 52.
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Fig. 53
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Fig. 54.
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Fig. 55
B
C
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A
C
C
D
D

[illegible] diuerè contang[illegible]ctiolum, sed ambit icalis quædam excitatur concavitas E. Hanc secta per medium, protractas ligneas fibras F ex[illegible]ibus pericarpi[illegible]det, quod temporis tractu in foveas, & fessuras ma[illegible]olvitur; in q[illegible] [illegible] ex[illegible] A, contenuata [illegible] am conversus, per inductum foramen C foras evolat.

[illegible] nte insuper æstate, interdum in Quercu (51.) si prototima occurrit Gal[illegible] [illegible]eria exiguæ radiosæ appendices, [illegible] memorum pchoamen- [illegible] [illegible] qua copiosa toventur [illegible] o[illegible] [illegible]em Septembris ec[illegible]m quasi Gallam ob- fig. 51. [illegible] f[illegible]ndis colorib, varias pra[illegible], [illegible] [illegible] In hac secta plures, & plures cellulæ, suis Gallæ perica[illegible] [illegible] [illegible] [illegible] ([illegible] eûs pl[illegible]a (53) infra ramos, & gem- fig. 52. Echinata Gallæ ma mas, plures eminatas [illegible] Hæ curvas appendices A, versùs [illegible] sumentora directas, cui[illegible] [illegible] sustunduntur, & temporis diuturnitate ligneæ reddunturtuus vero in basi vermis continetur, qui tandem musca[illegible] ciem ad pisc[illegible]

In humilem Quercu (54 [illegible] te æstate, vel urrente autumno, copiosæ fig. 54. Gallæ ema mata [illegible] [illegible] [illegible] emata, interdum a gemmæ dult A, [illegible] [illegible] [illegible]

totus verò [illegible] C, filamentosâ quâdam lanugine, in solidum corpus [illegible] exta, compagin[illegible], parent.

[illegible]

Quercus [illegible]

ribus hujusmodi [illegible], quæ in longum extensa, mollia, & crispa redditur. [illegible]otem globum efficiunt, [illegible], & [illegible] batio.

[illegible] analogi, quibus vermes conduntur. In Quercu (57.) interdum per[illegible]a fructu A, qui debitâ magnitudine privatur, fui generis Galla B: a secundina etenim C, semen amovente, & [illegible] sectus, in concavitate contentum exhibet vermem E. [illegible], & in singulis non eandem servat [illegible].

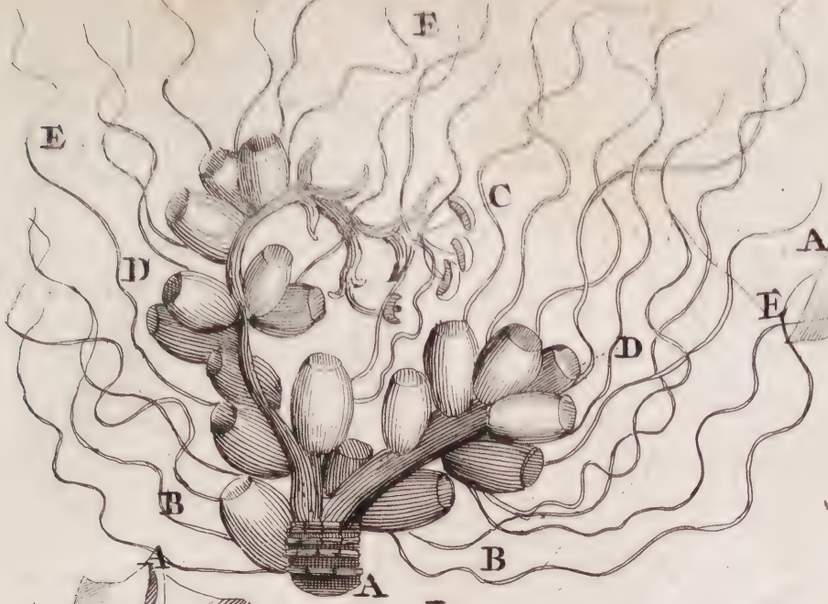
Galla in Avellana. In Avellana pariter nux inter [illegible] vulneris ei cicatricem servat; circa quam, crassiore ter[illegible], [illegible] observavimus.

In Pisi, & similium siliquis, persæpe exter ùs [illegible] catricum vestigiis, crassefacto ibidem pericarpio [illegible]ntus verò copiosi verm[illegible]li con-[illegible], qui [illegible] Pi[illegible] [illegible], quæ, [illegible], & [illegible] [illegible]

In Pisis.

[illegible] pictur

Fig. 56.



Pag. 124.

Fig. 59.

Fig. 60.

Fig. 58.

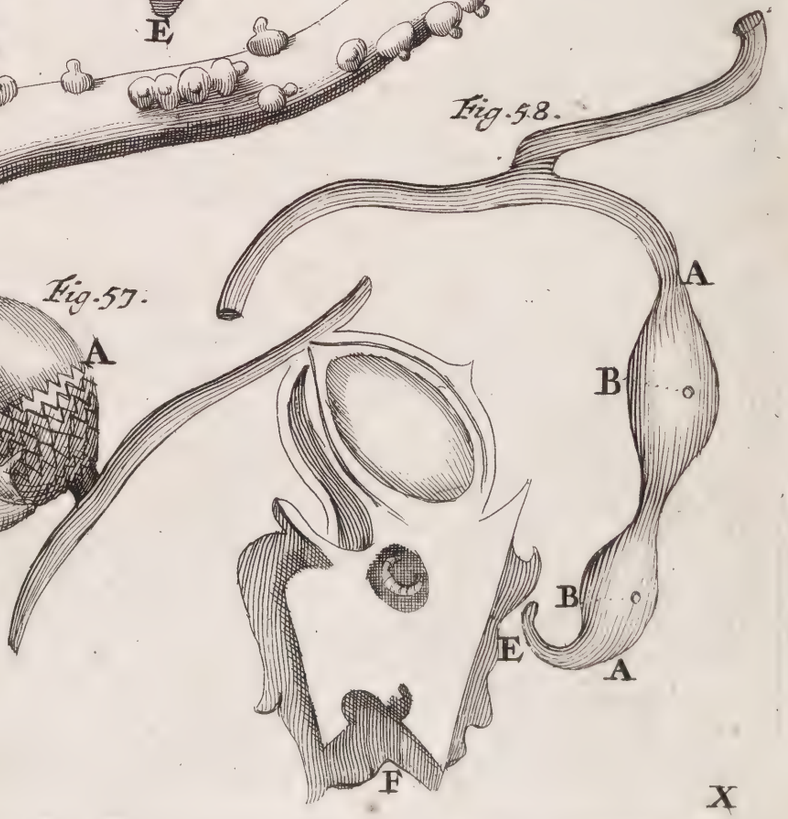


Fig. 57.

culum non deponi sub specie ovi; sed via. erodendo sibi facere, & foras iterum sub

Capreoli, & ipsi pra[illegible] in Vite (58) à mulcarum contagio nequaquam [illegible] gemmulos Uvarū tumores Asculos [illegible] ndi corticis excitatos observavi, in [illegible]ibus foramina B conclusis animalibus

Populatis exaratorum tumorum morbis non [illegible]mmas, folia, & flores affi-[illegible]cit, sed reliquas plantarum partes, dummodo [illegible]o intumescere possint, indiscriminatim tentare solet: Ita in surculo Q[illegible]cûs (59.) infra extrema folia A, quorum petioli in tumores monstruosos B [illegible]int, vermes custodientes, irregulares, & multiplices tumores C a surculi tenel[illegible] substantia interdum emergunt, qui [illegible] apice utplurimùm terminantur; ventre verò turgente, & contentos tot ver[illegible] fovent.

M[illegible]rem, & [illegible] admiratus sum. Hujus ramus A cum appenso surculo B, [illegible] exiguus Gallus C, exasperatus, pulchrum exhibet spectā[illegible] marum, & monstruosarum oriuntur Galliæ inanes eo[illegible] rax quasi lineâ connectitur. Quælibet Galla conico, pa[illegible]que exortu E à [illegible]gneis [illegible] & [illegible] se[illegible] & [illegible] p[illegible] striatum corpus, exsiccat[illegible] parent. Easdem Gallas in radice Quercûs sup[illegible] quas aliquæ consi[illegible] jacebant[illegible] servabant structu[illegible], & exteriùs rubic[illegible] & [illegible] [illegible]

[illegible] unde & contentu[illegible] ovum exsiccatum, & Galla inchoata non [illegible] aste vitiu[illegible]

Rubi pa[illegible] tus satis idoneæ hujusmodi tumores de facili [illegible] & [illegible] tenuis spinæ *b* crumpunt, lævis est exterior superficies præter n[illegible]ata & cicatrices. In secta per longum Galla, ligne[illegible] [illegible]monstrantur. In hoc itaq[illegible] [illegible]tes observantur, a candidis occu[illegible]e vermiculis *E*.

In Rubo pariter canino (62) trec[illegible]flumæ [illegible] tum palulant in foliorum pediculis, n[illegible], & [illegible], ex copiosis ete[illegible] [illegible] affluens succus, ut strum[illegible]hant compiura: [illegible] [illegible]ta, quæ articulorum seri[illegible], & hinc tam implicatione [illegible]mes *B* germinant; ita ut mamma quali tyrsa appareat. [illegible]s, hinc inde valvulos *C*, edit, quorum apex capitulo *D* [illegible] rubicundâ terebinthinâ referta: Hinc inde pili [illegible] [illegible] [illegible]

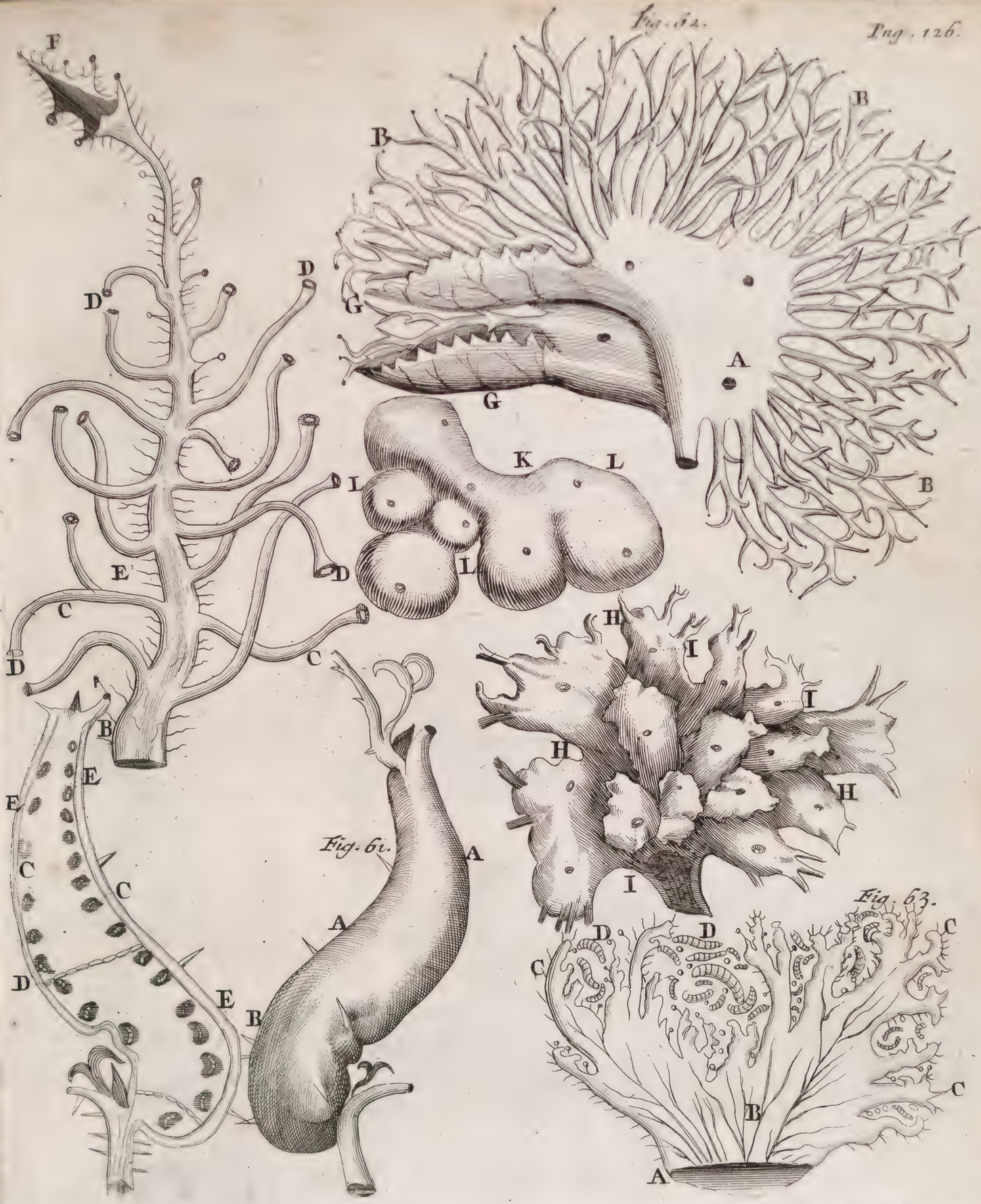

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Fig. 61.
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Fig. 63.
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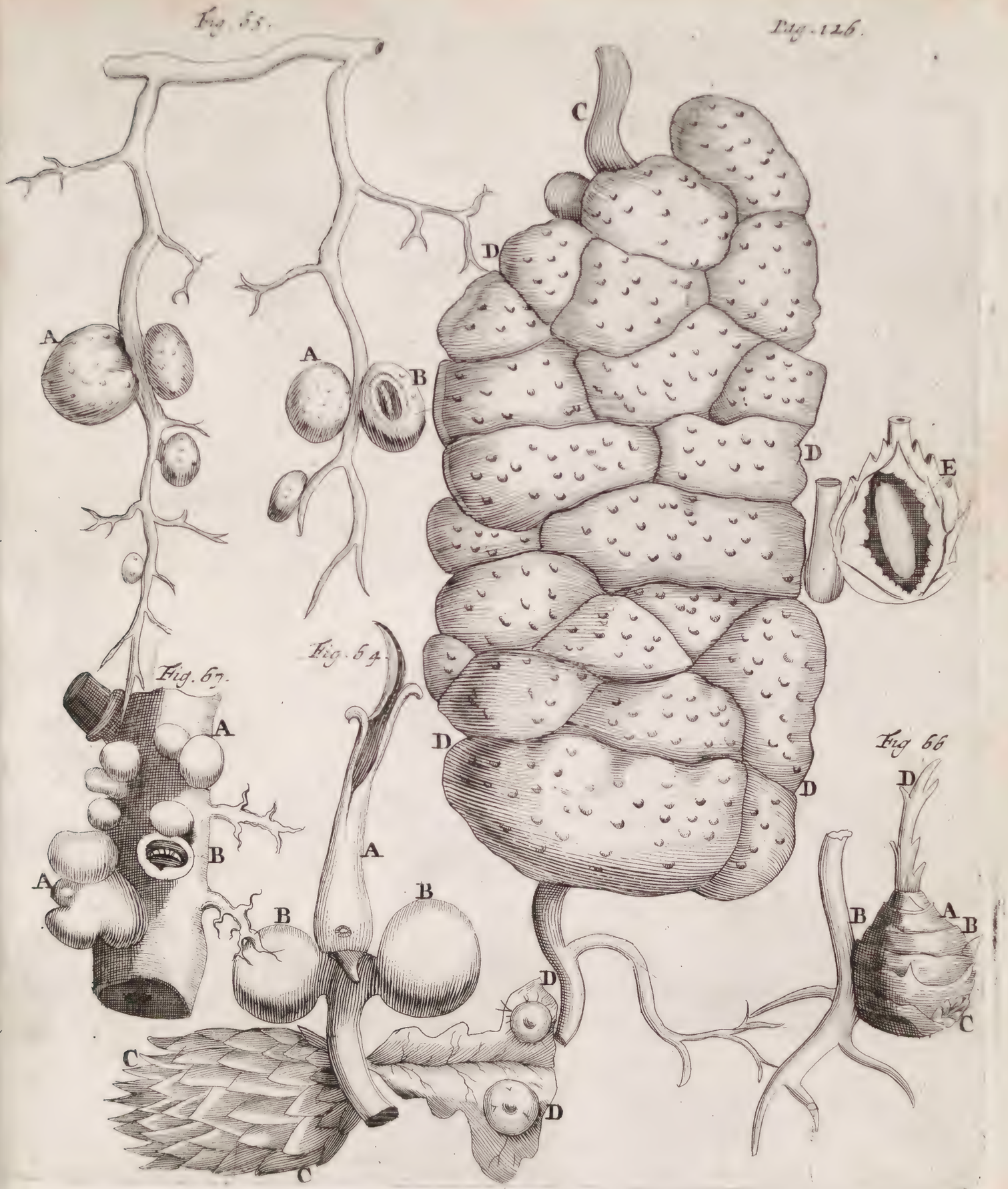
Fig. 65.
Fig. 126.
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Fig. 64.
Fig. 67.
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Fig. 66
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Fig. 70.

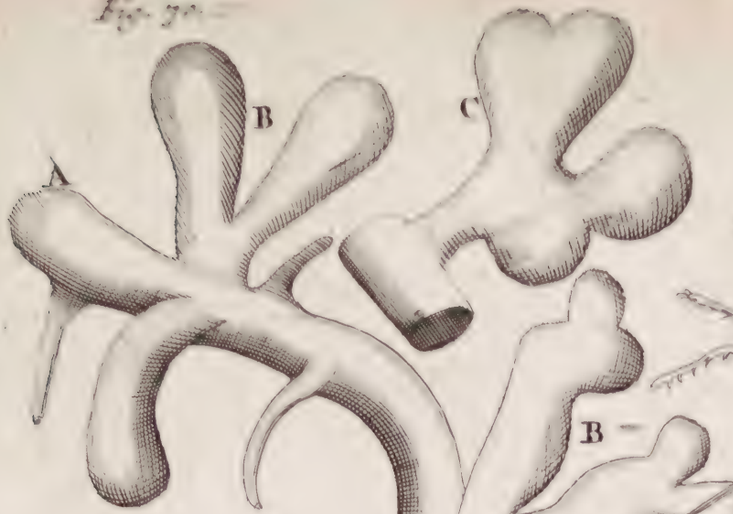


Fig. 72.

Fig. 68.

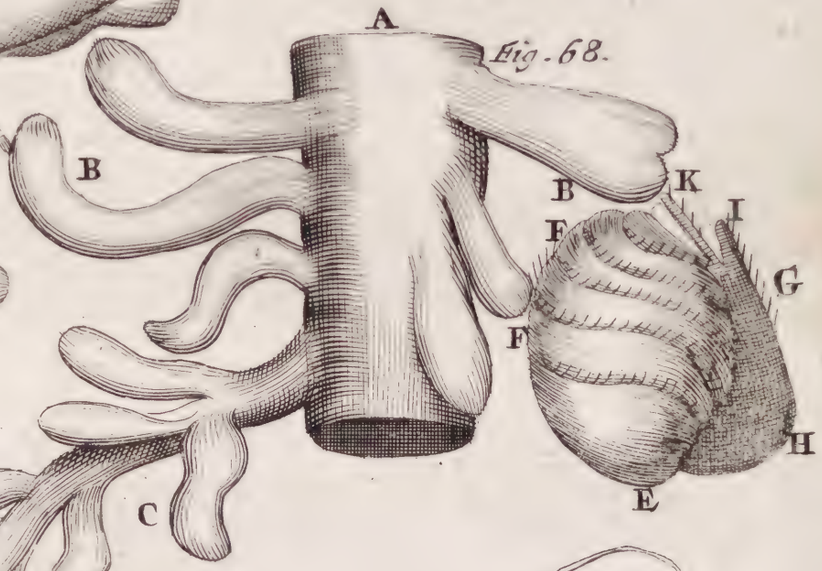


Fig. 71.

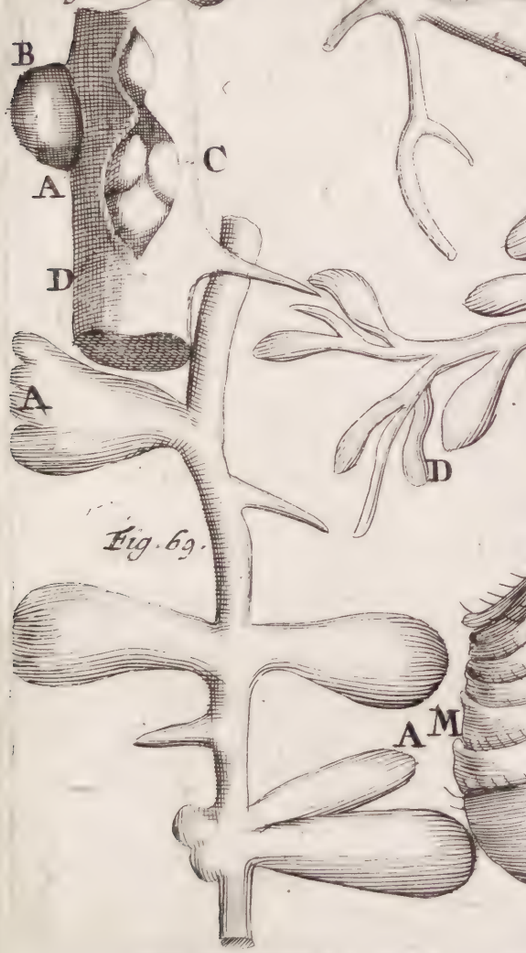
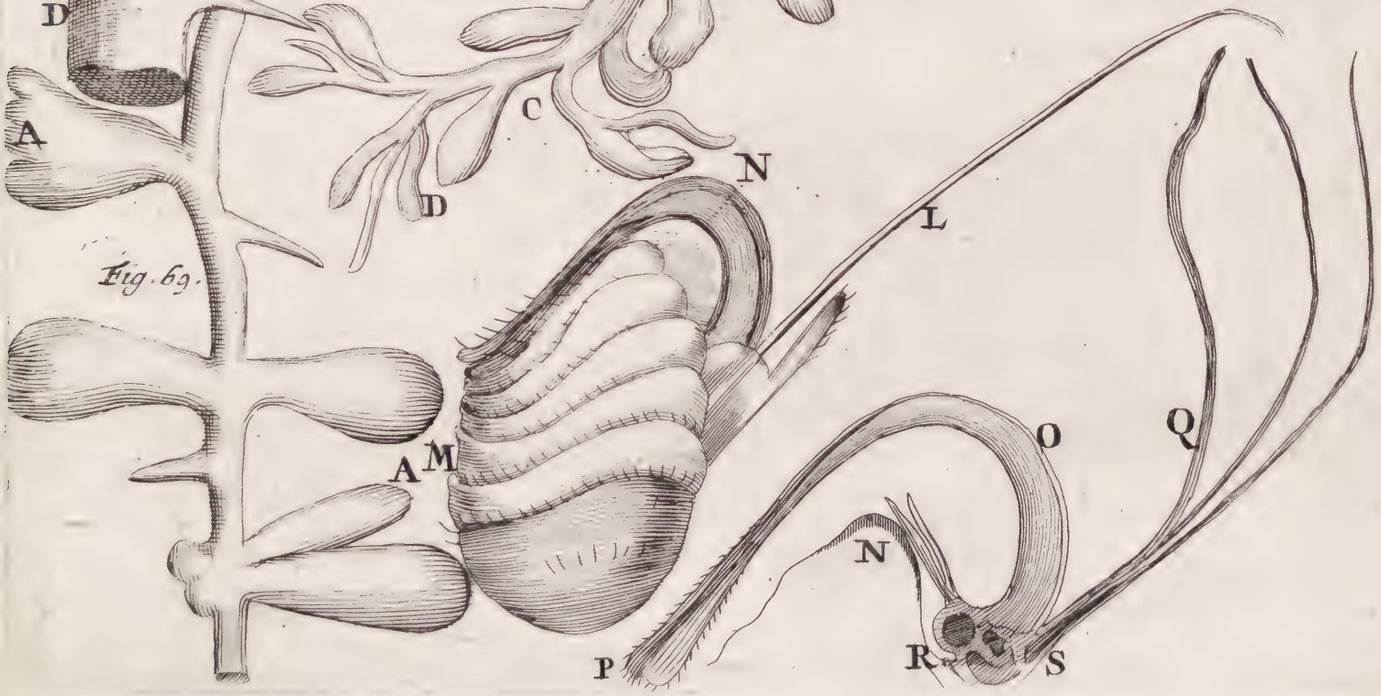


Fig. 69.



gemmæ rotundæ

temporibus labu

rentis radicalis excitat

Non semel monstratum hujusmodi Gallarum congeriem in ra-

Gallarum figura.

sortiuntur figuram ex mutua compressione; unde Pini

In arundine canalibus fo-

sortiuntur hujusmodi Gallæ.

In radice partier Tanyrhinus Ile (66.) non semel ingentem vidi Gallam A, fig. 6 Gallarum.

quæ a lateribus radicis fu compagem informit: ex Tanyrhinus Cigarrilis.

unde ligneâ constat sub a quibus gemmæ G,

& caulis apex D las concavitas excitatur, in

copiosæ Gallæ A, diversæ figuræ exumpunt, quæ

& radicem frequenter ex-

bus vermis insignis B latitat, qui facto

& consimilibus plantis appendices, Gallarum speciem referen-

in quibus, cùm hucusque frequenter vermes, & ipsorum

& dorsalis emittit, quæ varia constant formâ. Hæ externis corticis utric

nuntur, quibus radix excitatur. Intus

In novellis enim tumoribus roseum refert col

m. I

res, pendent, quæ patem fortiuntur structuram

s promunt, quasi ramulos, qui in radiculas solvun-

A, utriculis subalbis externis excitatæ. Harum

mus vermę, an ab exteriori animalculo, ingressum tenta

batur.

es adhuc Galbas lustrare. In radice itaque Fabæ (71.)

B promittat; sensumque in longum exte

igneum cylindrum ambiente

que us morbosis tumoribus

oniam plarum structura

Ibarat hæ pe A & A pisce

U

& & &

& & &

& & &

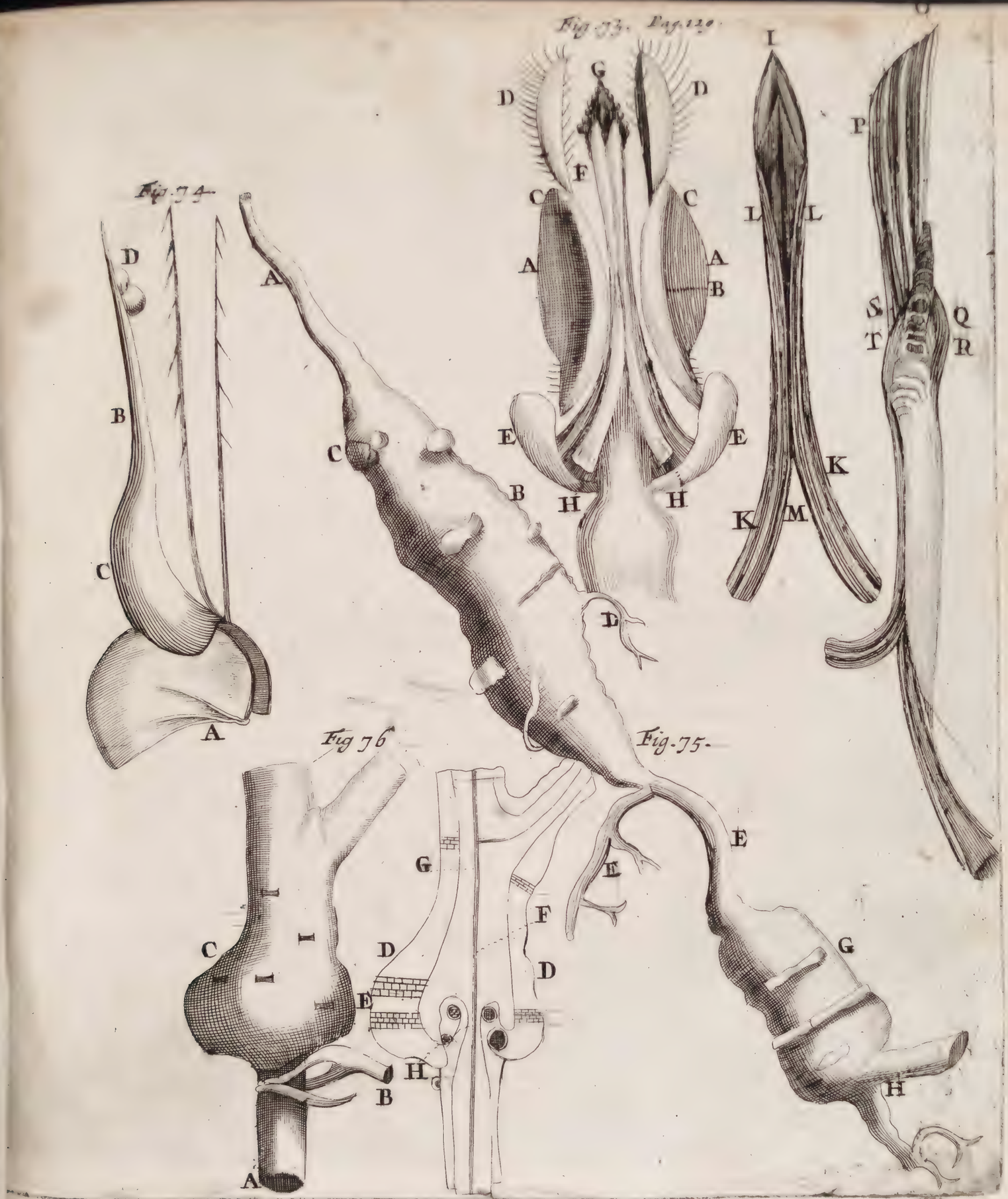


Fig 73. Pag. 120
Fig 74
Fig 76
Fig 75

[illegible] publique col[illegible]

[illegible]

[illegible]

ultra basiare corpus varie producuntur, & retrahuntur.

Specie erumpit, & tractu temporis concrescit.

querentur, Gemmæ adhuc germinanti : hærebat recens

[illegible] hasce partes, pilis cooperta : hæc inquam tere- [illegible]
[illegible] & nolies [illegible] rum partes; ità ut ex diversa
[illegible] r seriem auget. Con-
[illegible] um plantarum excitari, qui
[illegible] sorúmque adductâ mag-
[illegible] si fasciculi, & trachææ, vel breviores
[illegible] H hic conjunctam retineant tor-
[illegible] cas, adhuc vegetantibus, extra [illegible] versalium utriculorum succo contenti, seminam turgen[illegible], & [illegible] dicant : unde probabile est, [illegible]
augmento. In aliis, succedente vegetatione ex incinatis, & [illegible] bulis, totus ferè humor in transversales appendices exont[illegible] & [illegible] destinatus alimentitius humor, qui in furculi extendi debebat; in latum pro[illegible] tus, in Galbas desinit. [illegible] luxuriantis vegetationis turgentem impetum arguit.

[illegible] quis [illegible]

Gemmæ quasdam plantas vitiosi succi portio, quæ in Quercubus luxuriat, infesto terebrat ichore, & augendum concipit, & motum sui excitione factâ, reliquum humorem secum rapit, & ita ad tarefactionem fluxionis, & concretionem, morbosos tumores excitat. Quid simile in nobis experimur, ubi ex acidis humoribus, fames comes est, non tantùm internum excitatum patimur fervorem; sed lacerata partium compagium, novis laboramus cruciatibus, quibus dolore concretis figuris, in morbosas excrescentias luxuriant. Exaratam turgescentium morborum juvat habitus, quibus corporis ovis non raro efflat. Quercus nascentes non cuta harum parte, cum scopicem ovo vel vermiculo, amissa propria vivore, seu imbecilli, & frequenter convulsi distorquentur, sed tanta vis est & temperamenta exhalans, ut non tolerem proximam, Vis præcipue tonum, convulsum, rabiemque reddatur, sed & forcipes cui appendantur, totus contabescat & convellatur. Hoc tamen non ita perpetuum est in natura, ut nunquam ova ab insectis concepta nidum habeant, quam exigant subsidente tumore, vel partium atrophia mentis cum in Populi arboris casu

Ovum non quodlibet ad gemmam ingressum ejicitur.

detracti oblongum reperies corpusculum, cum cauda vel accrementum. Hoc horizontaliter locabatur, & extremitate inferiore gemmæ fibras cuticulares, altero autem fine parum exsiccato extremum corticis contingebat. Ova siquidem probabiliter committuntur intra varias plantarum partes, quæ nullum fere documentum exhibent, cum integra plantarum vitalitate maneant. Tam varius est Naturæ genius & insectorum exigentia, ut sicut partes fœtus & ova extranea regent, non solum vegetant, sed tranquillitate chaos, quæ auctionem & mutationem perficit, ita quædam sibi turbata concreta, humorem averfentur, & intra se cum plantarum, unde ova amphibiis, in testaceis, & in marmoribus ipsis occultantur & foventur.

Ova benè tantum sub pia matrum fotu gignuntur fluxem acidificque ignis.

Concreta ova inter succos, gemmas & corticem, non omnia animal promunt; in Gallis enim recte copulata ova latent, unum tamen vel alterum intra earum cavitatem vegetat, reliqua tabe contempta obtenebrantur. Aperiuntur autem in maturitate

Conclusio.

plantarum rumore corticis poros, & tandem patentem foris viam. Ita ergo Galliæ & reliqui plantarum tumores morbosæ excrescentiæ vel potius ova turbata plantarum compage, & vitiato humorum motu excitatur, quibus inclusa ova & animalcula, velut in utero, foventur & augentur, donec manifestaris, firmatrisque propriis partibus, quasi exoriantur novam exoptantia lucem.

DE

DE VARIIS PLANTARUM TUMORIBUS ET EXCRESCENTIIS.

Incidunt Gallarum tumores, in multiplicibus plantarum partibus Muscarum, & consimilium Insectorum contagio erumpentes & lustravimus. Quoniam tamen alimentum non perpetuo debitos exsurrit tubulos, [illegible], ideo circa has aliquam [illegible]

In *Prunis* [illegible] & *Persicis* [illegible] & [illegible], [illegible] & circa vegetationibus [illegible] & [illegible] & [illegible] &

[illegible] quam hic exponemus.

[illegible] tantum florum D contextæ, quæ [illegible] orum florum erumpit pulvis rubiginosi coloris. ‖ Sechus hujus[illegible]ream positionem E exhibet, quæ medullæ ordinatis F per longum ductis, rej[illegible] Externus crassus albus ditur [illegible] ribus & [illegible]

[illegible] pari[illegible] luteúmque pulverem tantum fundant.

[illegible]

[illegible] biliter à morbo contingere reor.

[illegible]

Fig. 77.

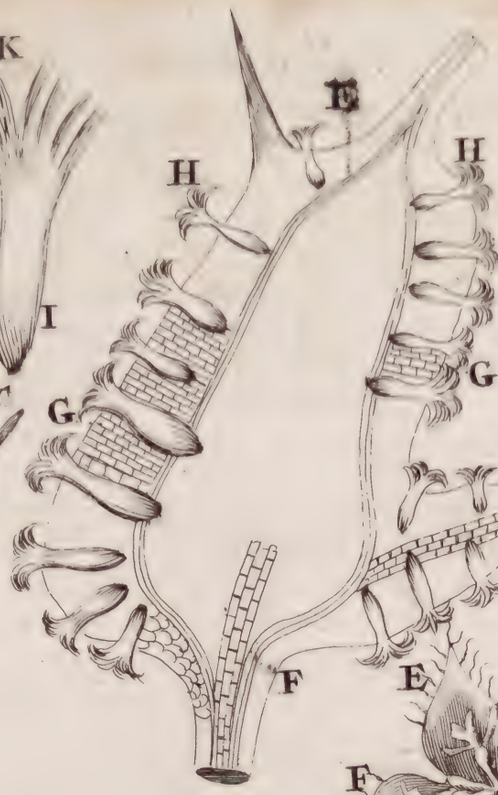


Fig. 82.

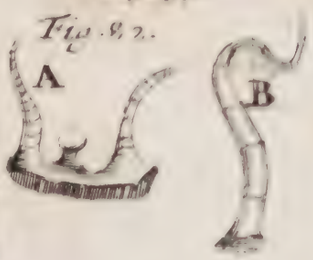


Fig. 80.

Fig. 83.

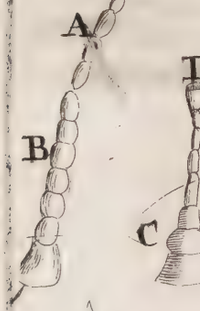


Fig. 81.

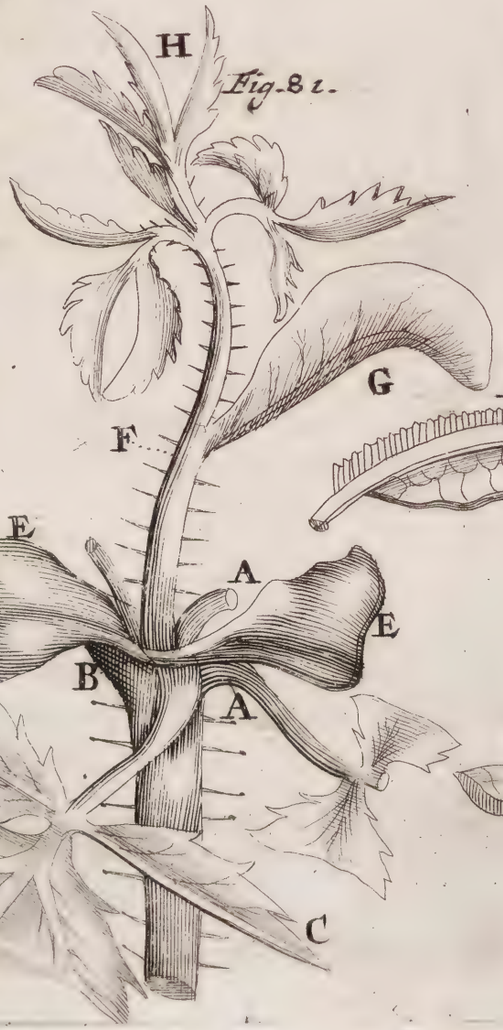


Fig. 78.

Fig. 79.

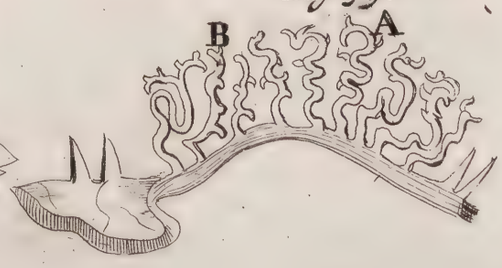


Fig. 85.

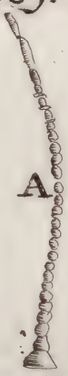


Fig. 84.

lantur, & à lat[illegible]s ramosas quasi appendices *B* promunt. Molles sunt, & crispi; unde invicem implicantur.

[illegible]; à tumo etenim crassior fureu[illegible]

[illegible], appendices *B* erumpunt, rubicundi coloris, cinereis cooperiæ pilis, quæ & ipsæ [illegible]erès novas excrescent [illegible]amenta prole [illegible]lices *B*, [illegible]

[illegible]ornatum folium *D*, quodin partes *E* divisum, novas [illegible] appendiculas *F*, rubicundas, reliquum verò *G* pilis amictum, vari[illegible]m retinet [illegible]

[illegible]

tam quàm œcono[illegible]

nunq[illegible]

Flores quoque, & uteri morbosis excrescentiis interdum tentantur; in *Rosa* (8t.) loco calycis, [illegible]nque folia *A* pendent, quæ proprio exortu concham [illegible] hoc [illegible]mina *C* m[illegible], sunt; [illegible] v[illegible] *D* amplum. [illegible] a copiosa spectant; quæ rubicundo colore [illegible]xdita, nativum [illegible] horum medio, stylorum loco ligneus caudex [illegible]am *G* emanat eodem colore tinctum, quo reliqua fl[illegible]ariola & gemmæ *H*, rubic[illegible] [illegible], hoc itaque fl[illegible]naliis verò Rosis co[illegible] miliis occurrit flos, in quo calyx, folia [illegible]tamis, [illegible] absque semine insunt, & ab horum m[illegible]

[illegible]

nam ab extremo [illegible] non gaudet; vel [illegible] Ex qua [illegible] [illegible]as humor liberiori viâ [illegible]

[illegible]

tentatis, in quibus, vaso[illegible]to, carneæ succedunt appendices; quæ tandem medicam exigunt [illegible] in animalibus, constrictis, vel obstructis ab acidis, vens & [illegible]

[illegible]

[illegible]

DE PILIS & SPINIS.

[illegible] ipsique ad robur Spinas addidisse, Horum igitur indago [illegible]

[illegible]

[illegible]

[illegible]

luteo quoque succo referta, quæ evanescente humore obl[illegible]

[illegible] & [illegible], & tempe[illegible], [illegible], [illegible] olim color, in cervinum vertitur.

[illegible] Spinarum naturam æmulantes.

[illegible] & [illegible] & [illegible] & [

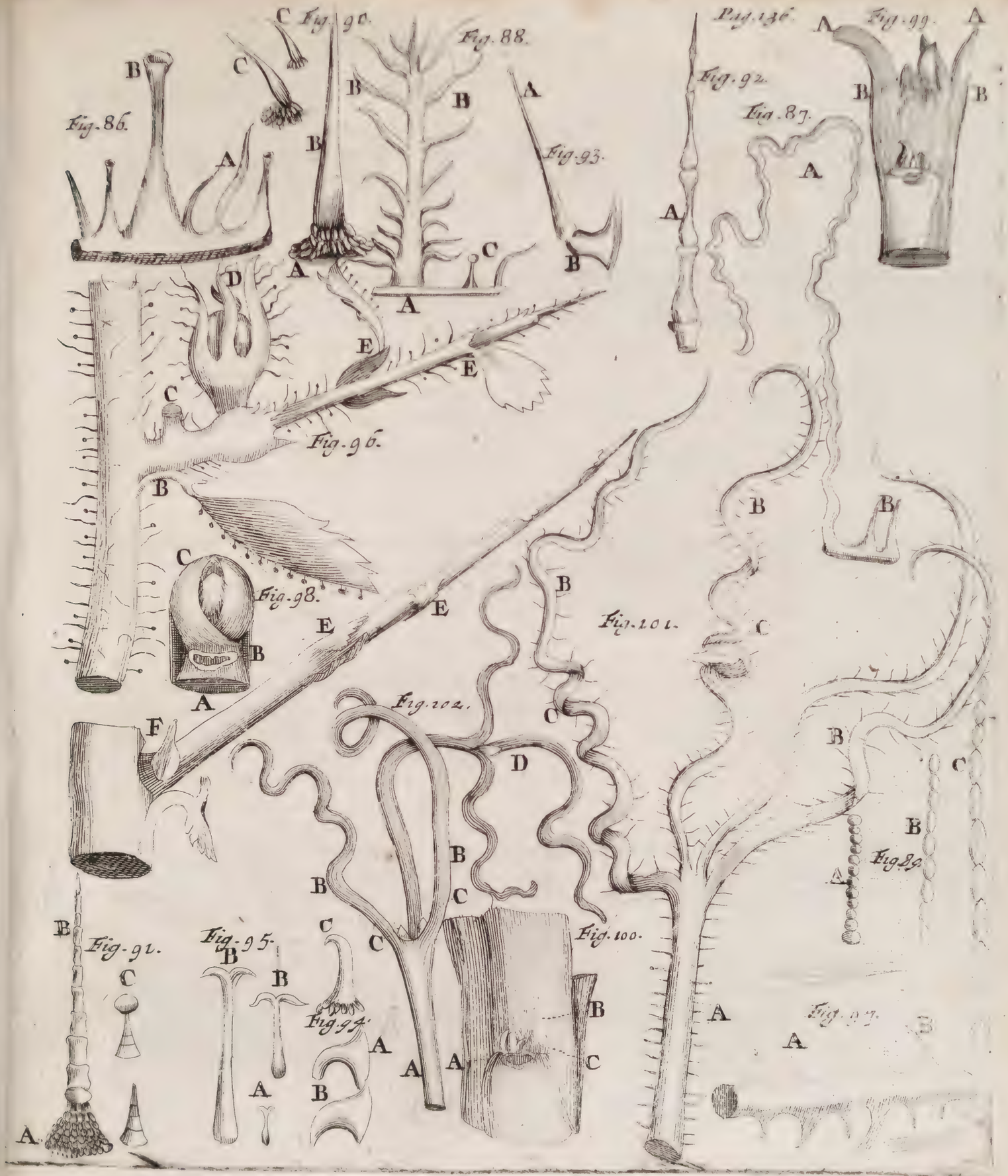


Fig. 86.
Fig. 90.
Fig. 88.
Fig. 93.
Fig. 96.
Fig. 98.
Fig. 91.
Fig. 95.
Fig. 94.
Fig. 102.
Fig. 100.
Fig. 101.
Fig. 136.
Fig. 92.
Fig. 87.
Fig. 99.
Fig. 89.
Fig. 97.

stant mutuum P li & fung C.

[illegible] hyeme etenim, circa vr

mam B, C, & postremò evanescente tumore oblit

tum hucusque exarata conformatio adeò Spinis ſ ffinis est; ut in plerisque

unò, vel altero internodio ſtrve

& copia, diversimodè figurantur.

morem fermentatione mediâ, velut infusa aqua regia, ex

Veneris Labrum, & *Bardana* (94.) recurvis quoque ur Spinis: horum folia fig. 94. In Veneris
in superiori superficie, & in pronis costulis, Spinis ho a reddunt, quæ fattori libro & B.
tur, & pertractantium manus feriunt, vestibusque hærent.

fig. 95.

S L

rata vegetatione, in aculeum pene oficum acuminatur.

Ab herois ad frutices & arbores transitum fac[illegible] spicibus Spinis mununtur, [illegible] tes, capitulo polient, à quo terebinthus [illegible] dicitur, reuquæ foliatiores, &

In *Oxyacantha* (98.) Spinæ præ cæteris emi[illegible], &

Fig. 99. Spinæ in Malo Limonia & Aurantia. *Malus* quoque *limonia & aurantia*, 99.) suas [illegible] ce ig rus tenelli furculi, gemma infur[illegible] n basi co nica sese efferunt tumores B, qui in S[illegible] furculo, in axilla (100.) avulsi folii A latere cubantes; [illegible] t: hæc tractu temporis, in basi C latior reddita; [illegible] nus, ut adhuc nos

[illegible] rumpat, & digeratur. Gemmarum te- stibus folia coni[illegible]

quæ pro[illegible] simodi

[illegible] emergit, & [illegible] nuit vegetatione acuitur.

DE CAPREOLIS ET CONSIMILIBUS VINCULIS.

foliorum eruptionem frequentem formentur exortum, per totum furculorum tractum, & præcipue circa apicem, ubi crebriores sunt, nec tam ad contactum sed temporis diuturnitate, ligni reddantur & ipsales quæ illidem compingantur partibus, quas possidet lignum.

Fig. 7. 8. In Hedera.

Eadem solicitudine nonnullas firmavit Natura plantas, arcta elargiendo mechanica. In *Hedera* 103, furculi, & rami *A* hinc inde radiculas, quasi radiculas *B* emittunt, quæ parietibus, vel occurrentibus arboribus circumligatis firmantur, & in altum sustendentur. Hujusmodi radiculæ subrotundæ sunt, & pilis cooperiuntur; & quod mirum est, quamvis sua sponte humorem, seu terebrantinam, quæ arctè lapidibus nectuntur & agglutinantur. Expositæ radiculæ tubulas & tracheas fasciculum *C* congestas, formantur, quæ a ligneæ portionis circulo medullam *D* ambiente dervantur: à cortice verò utriculorum ordines communicantur, quibus omnibus cylindrica radix constituitur.

Fig. 9. 10. In Capreolis vitis Canadensis.

Non minori industria Natura utitur in *Vite Canadensi quinque folia* 104. Capreolos effingiendo, quibus firmare excelsa petit. A ramis igitur, & furculis *A* in nodo contra folii eruptionem capreolus exoritur. Hic quasi trunco *B* constat, cujus color rubescit & longâ vegetatione ligneascit. A trunco, hinc inde, appendices *C*, & quasi digiti, nudis nodis erumpunt, qui maturitate temporis, crebrius instar in spiram contorquentur. Horum extremitas, dum tenera sunt, acuminata *D* extat: senescens curvatur, & reflectitur, tandem verò laxatur in corpus *E*, quod papillis, seu minimis siphonibus referrum, terebrantinam fundit: unde particulæ hærens, concretam quasi cuticulam *F* effornat, quæ nisi summa cum vi, a trunco, vel subjecto ligno evelli nequit.

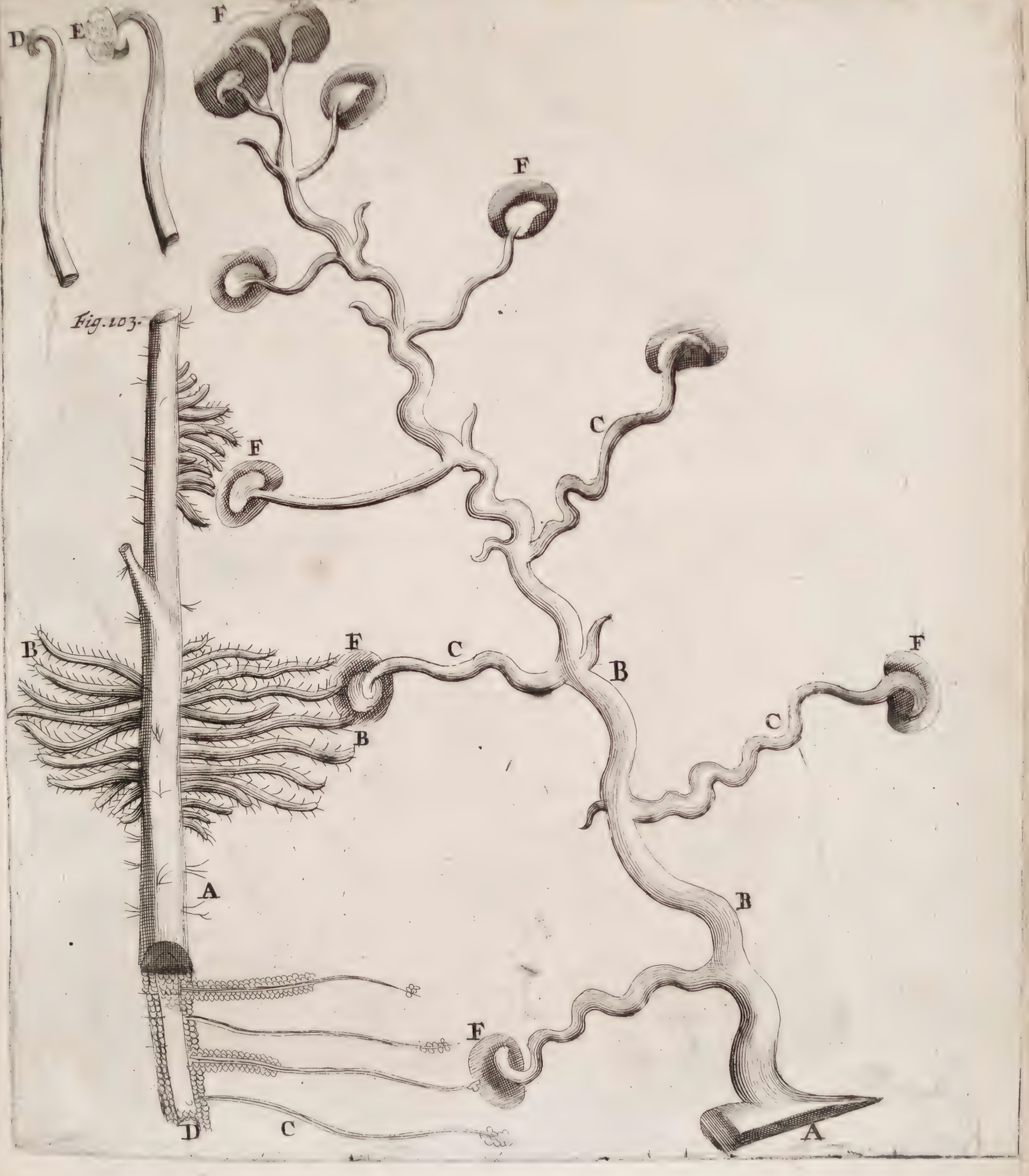
DE PLANTIS QUÆ IN ALIIS VEGETANT.

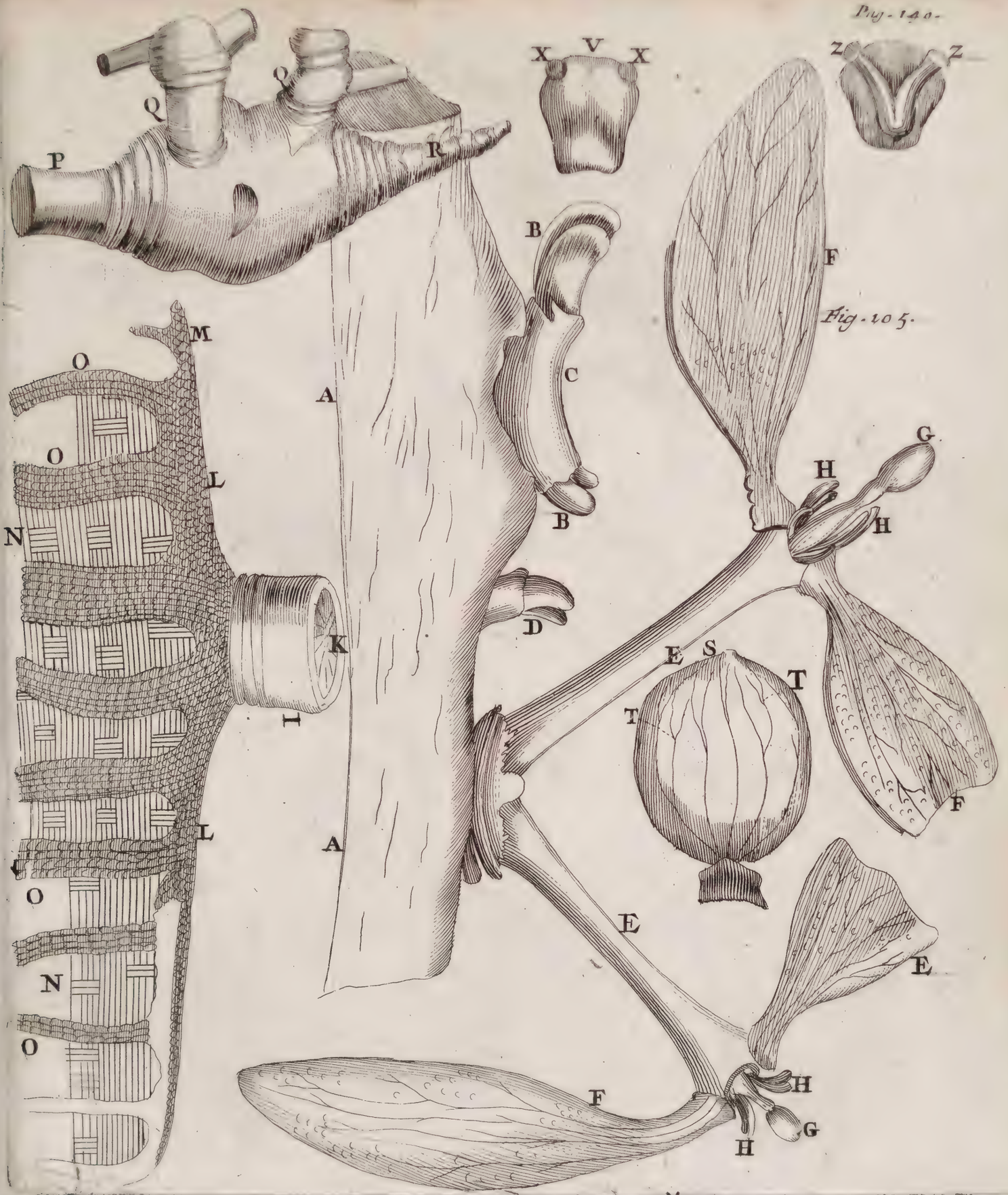
Anatome vitis Canadensis. Fig. 11.

Inventum officia adeò ex Naturæ legibus sibi invicem mutua sunt, ut non solùm animalia diversa animalcula alant, & foveant, ea & plantæ ipsæ alias quoque exercanas contineant, & quasi in mutationem vivacent. Id passim in *Vitis quercina* 105, occurrit, cujus anatome exponenda venit. Hic igitur, triplex truncus, a Pumilionum *A* ortum trahit. Varias dein novas plantulas, & primo tenellas adhuc, quæ a minimo trunco germinas

Fig. 104.

Fig. 104.




Q
Q
P
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X V X
Z Z
B
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Fig. 105.
M
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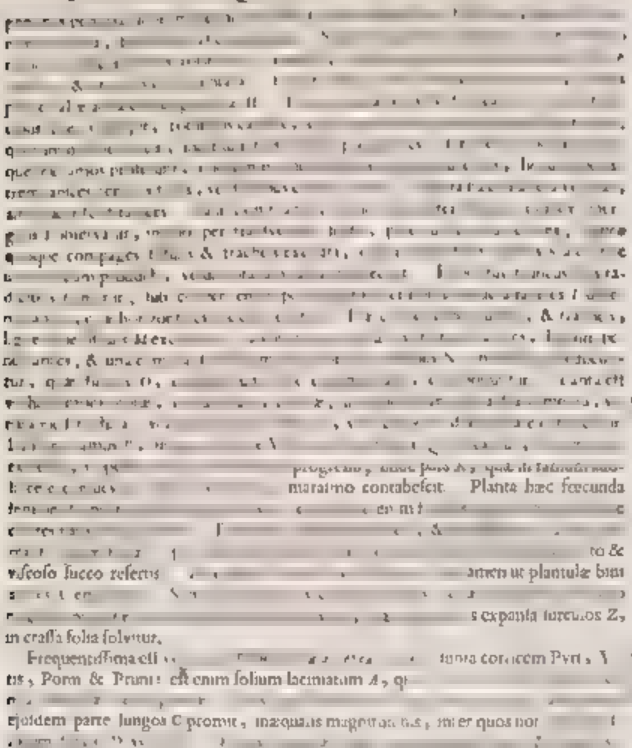
Fig. 106.



S 3

[illegible] & quandoque tres lungi, [illegible] opagentur, adhuc obscurum [illegible] Pulmonariæ A excitari tumulos M, a quibus emicat g[illegible] [illegible] [illegible] [

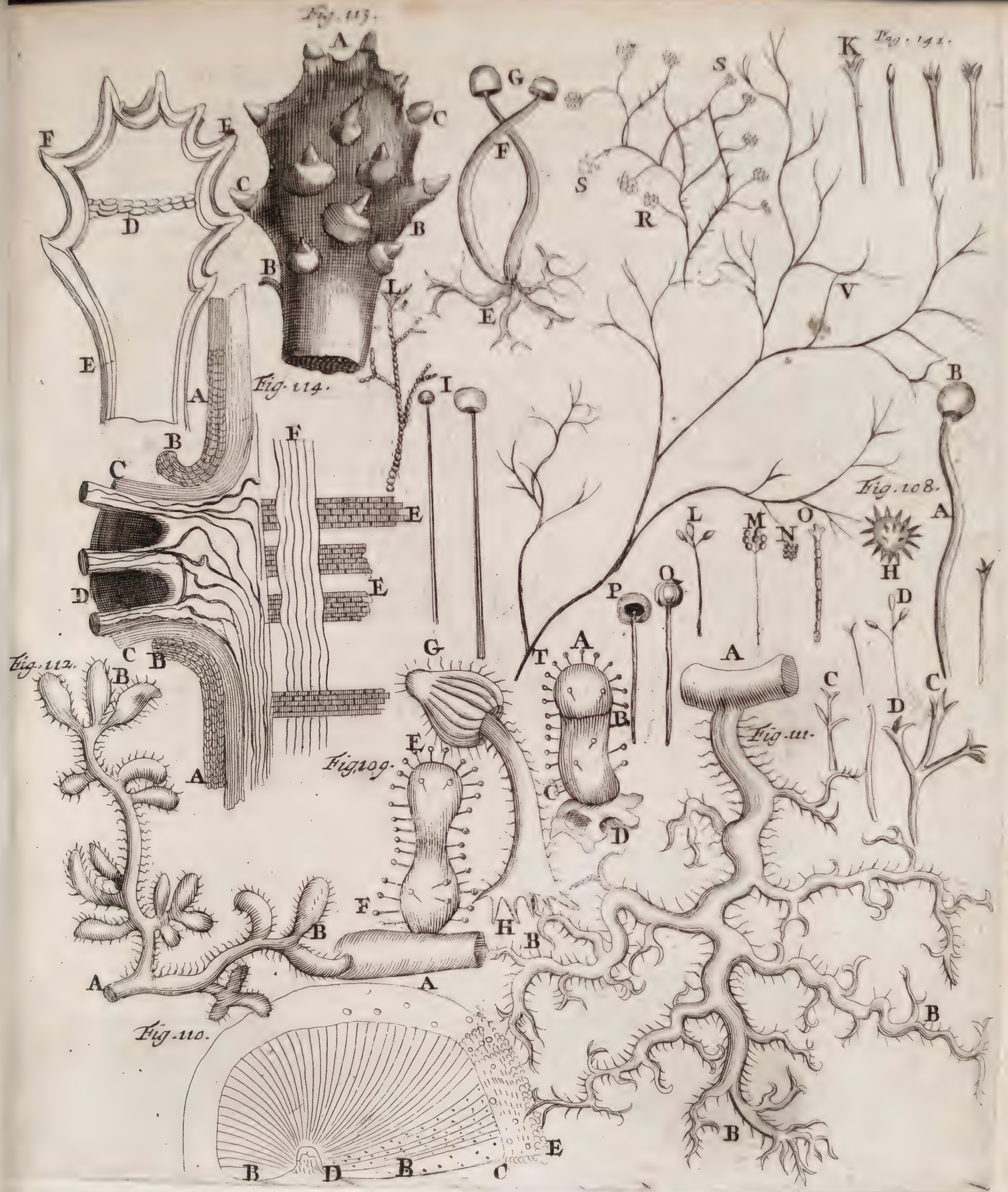


Fig. 113.
Fig. 114.
Fig. 112.
Fig. 109.
Fig. 110.
Fig. 111.
Fig. 108.
Fig. 141.

[illegible] plantulæ elegantissimæ, modò quinque, interdum tres, & non [illegible] attolebantur, sub fungi forma à comm[illegible] [illegible] supra vasis exornatum superbiens [illegible] & semisphærico capitulo G termi- [illegible] [illegible] [illegible]

tas et alimenti aliquantum micantia, quæ sicca, ut arenæ, vel leges fistula producuntur. Eandem speciem, minimam tamen, in eodem [illegible] observavi, quæ ultra capitulum E subrotundum, latumque pedicul exortum F [illegible], & filamentis firmatur. Hujusmodi fungi eatum fortuntur augmentum [illegible] tamen [illegible], interdum pro [illegible] & corpus augetur [illegible] cassis processor vasis, cancello pellucens colore, pilos jam ante dictos ex nucleo incorrupto pendentes habet, quasi exiguæ radices, erumpunt, quæ per latum, seu corruptæ [illegible] fragmenta, propagantur

Lusitanis Plantulas in [illegible] propagationis [illegible]

Plantulas igitur, e diversis vegetantibus assurgentes, [illegible] Hæ quasi nutritione unitæ, à communibus vasculis, & utriculis communem materiam exhaurunt, & in proprium vertunt alimentum. Inter has quæcunque ejusmodi ova, [illegible] dum hujusmodi propagationem extendunt, ut in Veneto querceto demortui, humus eosque vero ignota adhuc nobis via multiplicantur, & enascuntur, inter quas præcipue sunt Fungi, & Mucedo. Varia ejusmodi materies, a qua passim Fungi oriuntur, & ut videre potui, vel a ligno, vel ab ejus fructibus, utplurimum elevantur, & in exortu, filamentorum ingens contextus nexuntur, a quibus tandem in suo crescendo unitis, hi caulis, Quare vel Fungi, Mucedo, & Muceus proprius seminibus gaudent, quibus ipsorum species perpetuatur, vel ex [illegible] eorum vegetatione pullulans, ut in aliis plantis contingit. [illegible] contentus in utriculis transvertalibus adhuc succus, superveniente exteriori humiditate fermentatur, & extra turgendo quasi nectar, effluvia namque, priorum instar concreta, contextum probabiliter efficiunt, unde diversion subsequente fermentatione, & quasi vegetatione (urgente exteriorum aeris elastica vi) congesta sursum in caulem exiguntur; & de scente vi effluviorum, prementeque aeris gravitate, qua reflexa, in capitulum desinunt. Pantularum igitur hæc fistula ventris deteritur, & in locis supernationis oræ expositis vegetant: in opposito autem sicut difficulter radicantur nam fons radius ovens humor dissipatur

---

DE RADICIBUS PLANTARUM.

Arborum, herbarumque omnes, [illegible] decoram partem succhonem, & nutrimentum exigat, eumque loco movere nequeat, non exiguam sui partem in alimenti capturam, quasi tot manus emittit, quæ per subjectum solum alimentum quæritant & immobilitatem plantæ stabiliunt, hæque *Radices* appellantur.

Aristoteles Radices quid sint.

Patent

[illegible]

erpendiculariter elongatæ, radiculas hinc indè pron
ribus familiare est: in plerisquè verò productus

[illegible]

rudis delineatio per pottora capita inferiùs habeb

[illegible]

am crassitie æquantem, observavi, & [illegible] de semidiametrum ru[illegible] et deb-
vi. Hujus exterior superficies c[illegible]num præ se fert, & cop[illegible]
oranæ utriculorum [illegible], exteriorem corticis regionem
c[illegible]pant; in quibus [illegible] eminent; quibus lacerati,
n[illegible]numus quidam [illegible]umpit. Sub his alia pariter
[illegible]imi reticularis contextura,
[illegible]ium liber luxuriat. Craf-

[illegible],
bus utricul[illegible]
quam perpe[illegible]
existant. [illegible]
[illegible]lium utriculo[illegible]

Arbi[illegible]

ce *A*, quæ cra[illegible]

Occur-

Fig. 111. Radicum ...

...ndrus custoditur, qui externus albo, utriculis congesto cortice, cooperitur. sub hoc lignea portio la...

Fig. 112. Conf...

...amplexantur, in radiculas F elonga...

Fig. 4. Naturalis Radicum exortarum...

Mirabilior est Radicum exortas... tas, quasi plantatus, elegantes et... circumassurgente cortice, quasi obducto labio, quod ex... & medulla, in Radices congestis, aditum perm... sectionem detexi, ut facilius singula pateant. ... qua labium B efformat; interius tenuior ejusdem c... ipsa ad extrà derivata, Radicum exortum custo... & tracheæ tortuosæ, & varicosæ redditæ D, quæ in ti... efformant radiculas, quarum centrum medulla, seu transversales ... Idunntur, unde superequitantes fibræ rectæ F accessario obliquantur; & hujusmodi ... ior versus medullam propagatur; intigniter tamen est p... ope corticem.

Frequens pariter est Radicum emanatio in *Granum* (115.) non... & appensis propagimbi, sed in caule, & continua... ... ... quoque subjecti soli humore madens. Nodus ...

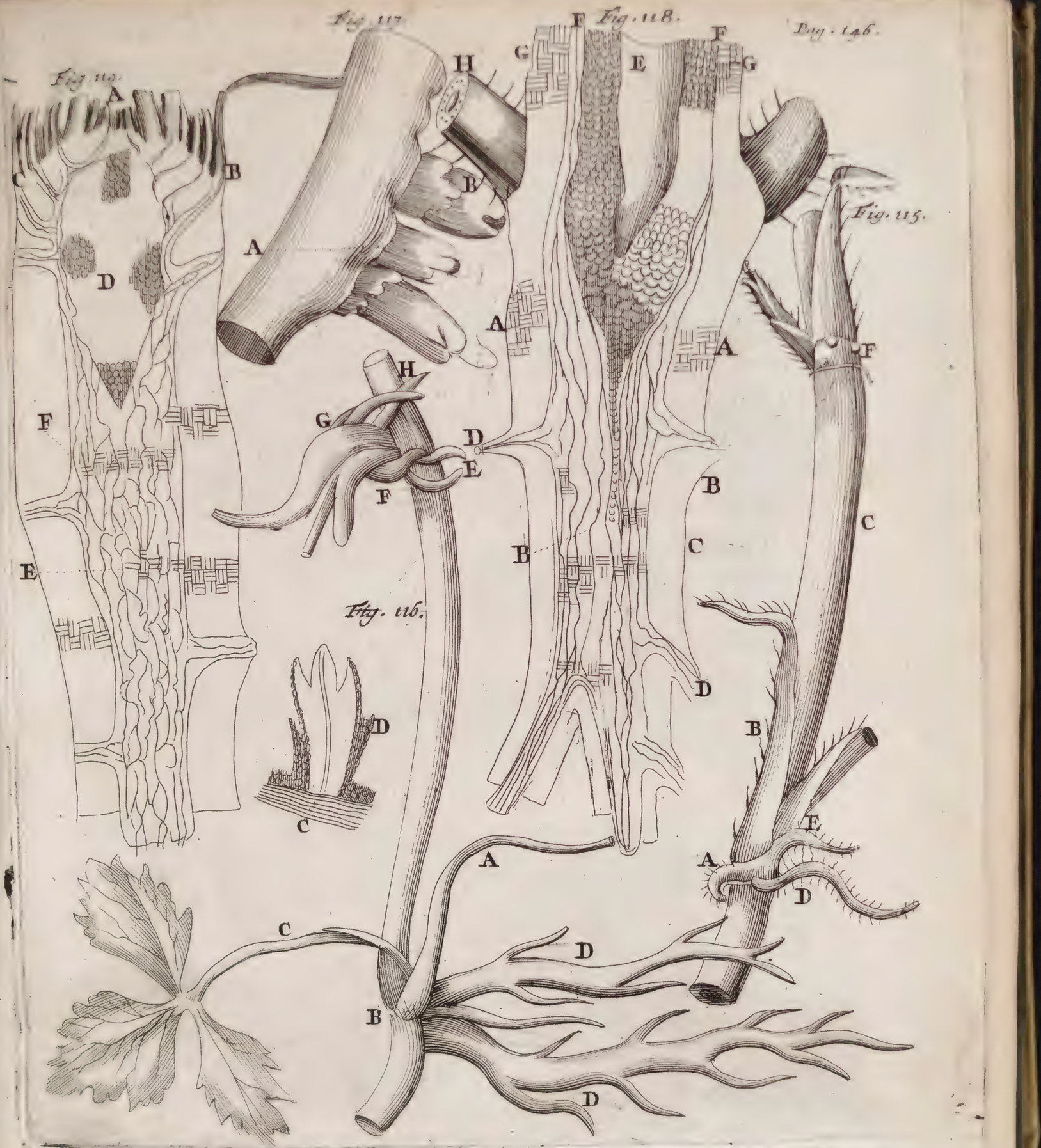


Fig. 114.
Fig. 117.
Fig. 118.
Fig. 116.
Fig. 115.
A
B
C
D
E
F
G
H

tamores *F*.

Consimilem Radicum eruptionem miramur in *Pentaphyllo*, *Fragaria*, & *Ranun-* In Pentaphyllo, Fragaria & Ranunculo.
culo, humique serpentibus, promunt. In primo genere, [illegible] mma promunct, cujus internus so- [illegible] lis *B* occurrit; reliquum vero C [illegible] tur; à subjecto autem nodo perp[illegible] productæ Radices *D* [illegible]
Aliæ insuper R[illegible]ces supra nodum, lacerato [illegible]
In subsequenti pariter nod[illegible]næ tenellæque Radices *E* unà erumpunt, supra quas [illegible] tur, & ab hac lacerata novæ Radices *H* prohiunt [illegible]

Inferiùs dabimus: pro nunc autem sufficiet[illegible]læ, quæ à *Convolvulo* (117) erumpunt; [illegible] trees enim contiguæ, lacerato albo cortice *A*, emin[illegible]tentatus solus *B* contexit e[illegible] de quælibet ipsarum secta, ligneas fibras, & [illegible], in cylindrum congestas *C*, exhibet; quem cortex *D* in folia divisus circumdat, & [illegible]
[illegible] R[illegible], & [illegible]
[illegible] exhibet corticem *A* valde crassum, qui [illegible] cum locatis. *F*.
[illegible] & [illegible] rizontæ cum articulorum fibræ *C* locantur [illegible] ultra medietatem, inferiora versus, minima custoditur [illegible] portio identidem minores Radices promit *D*; quæ & ipsæ [illegible] ortio dilatatur, & interius tubulosa redditur; ità ut [illegible], locum præbe[illegible]
Varia el[illegible] zontali decli- [illegible] In plerisque tenellis caulibus co[illegible]nua adhuc est me- [illegible]tem (hoc est inclusum anno) concavitas *E* excitatur, [illegible] reliquum autem gracilescentis ligni *F* in fistu- [illegible] ambiente cortice *G* in caulem, & ramos *H* absu- [illegible]
[illegible] R[illegible], [illegible]
[illegible] *A* in apice c[illegible], [illegible], A

rio, evidenter observantur.

caudicem E attollit, à quo gemmæ F pullulant.

Fig. 120.

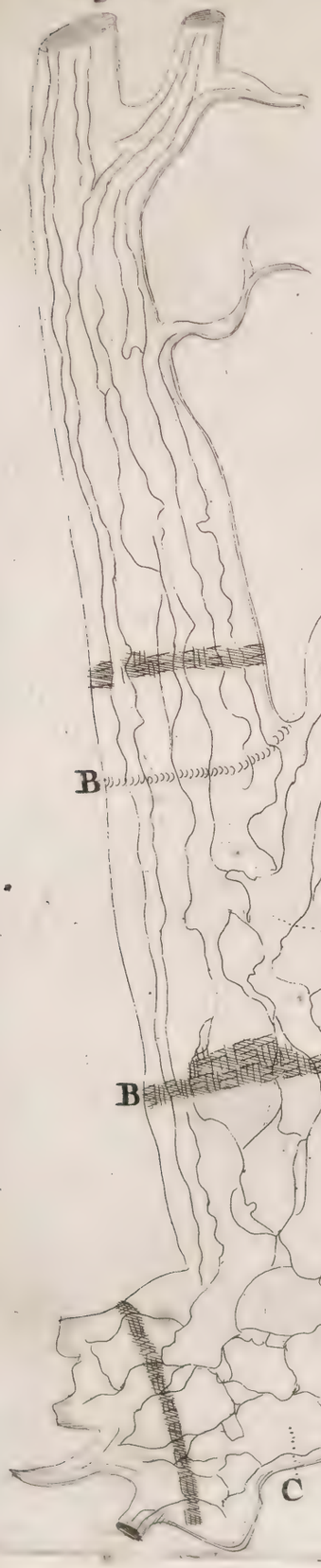


Fig. 121.

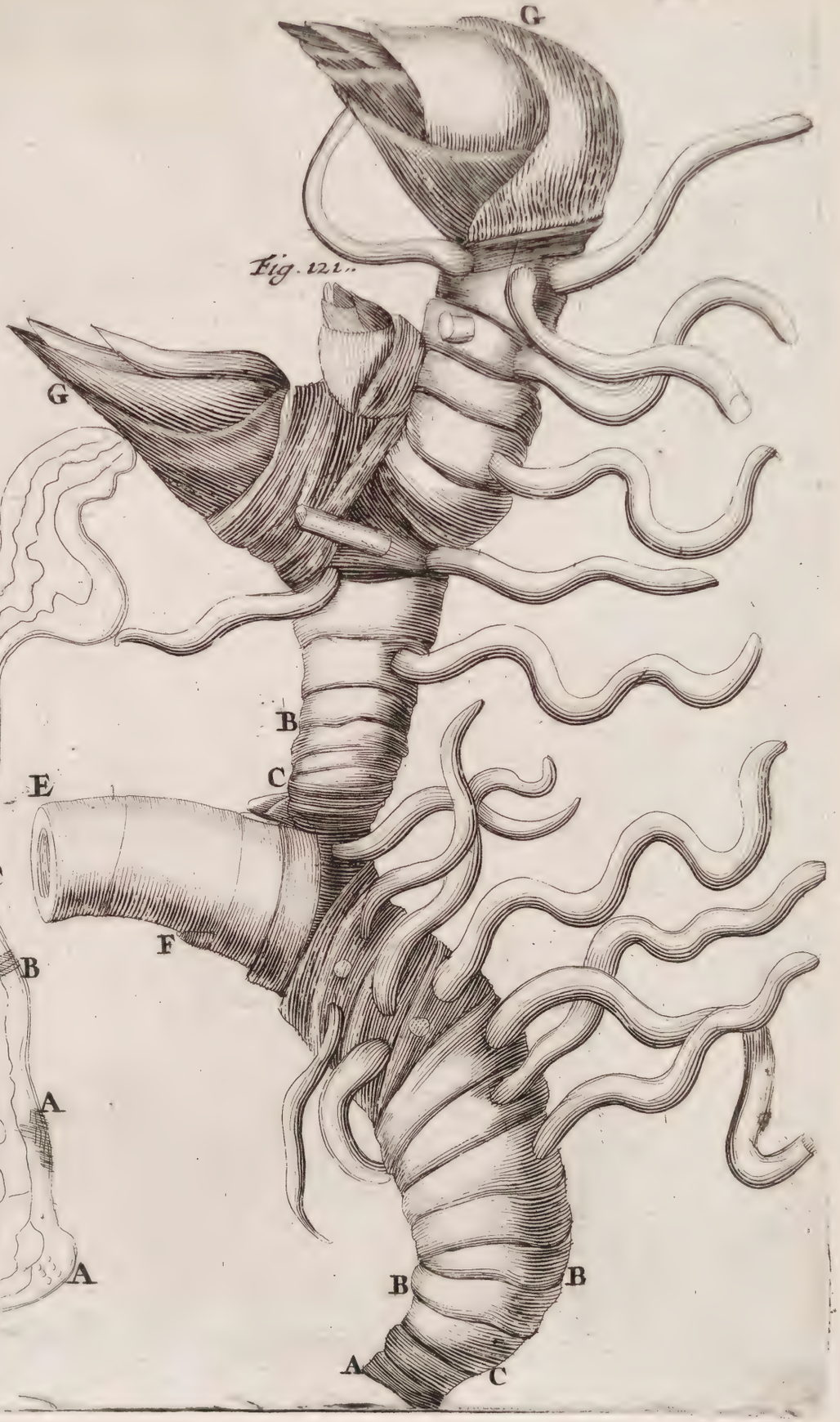


Fig. 122.

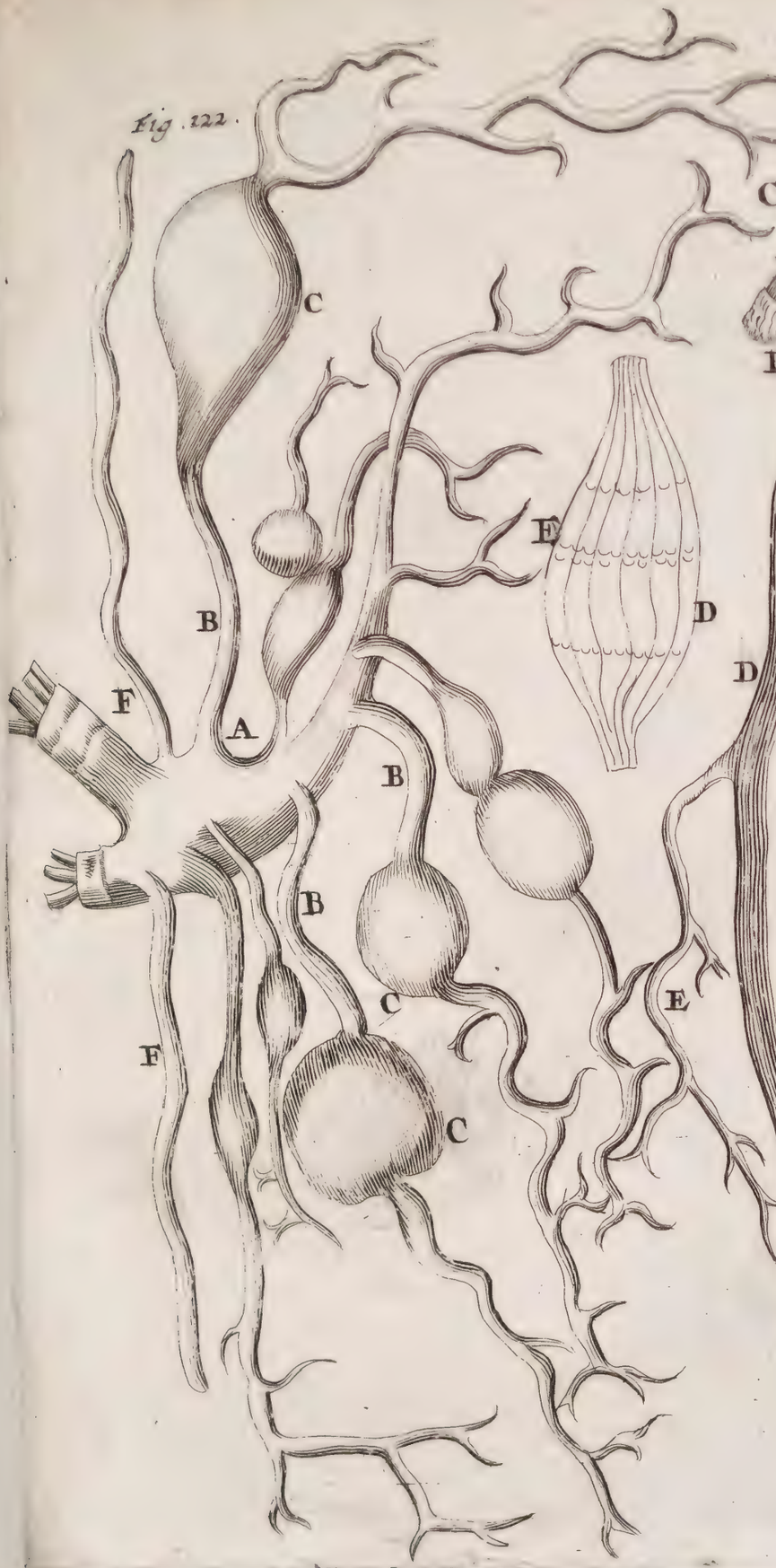


Fig. 123.

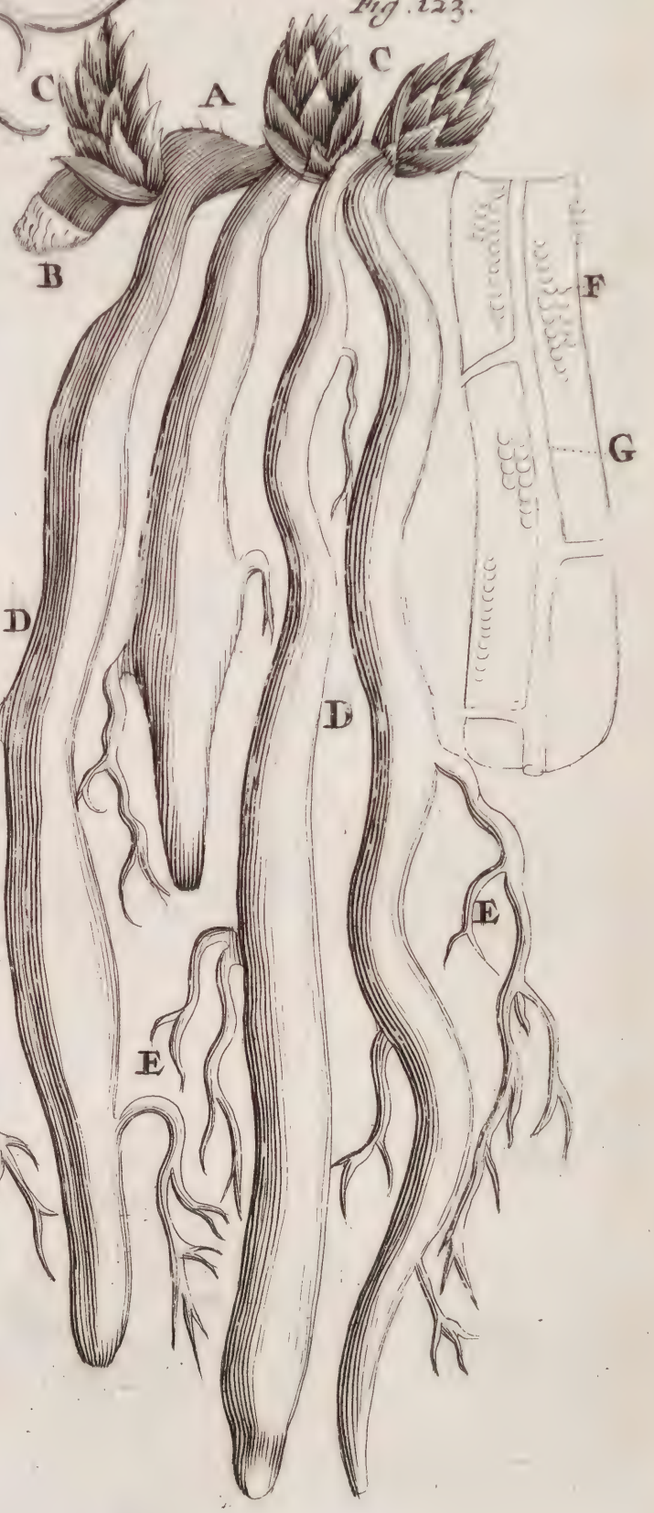


Fig. 124.

Fig. 126.

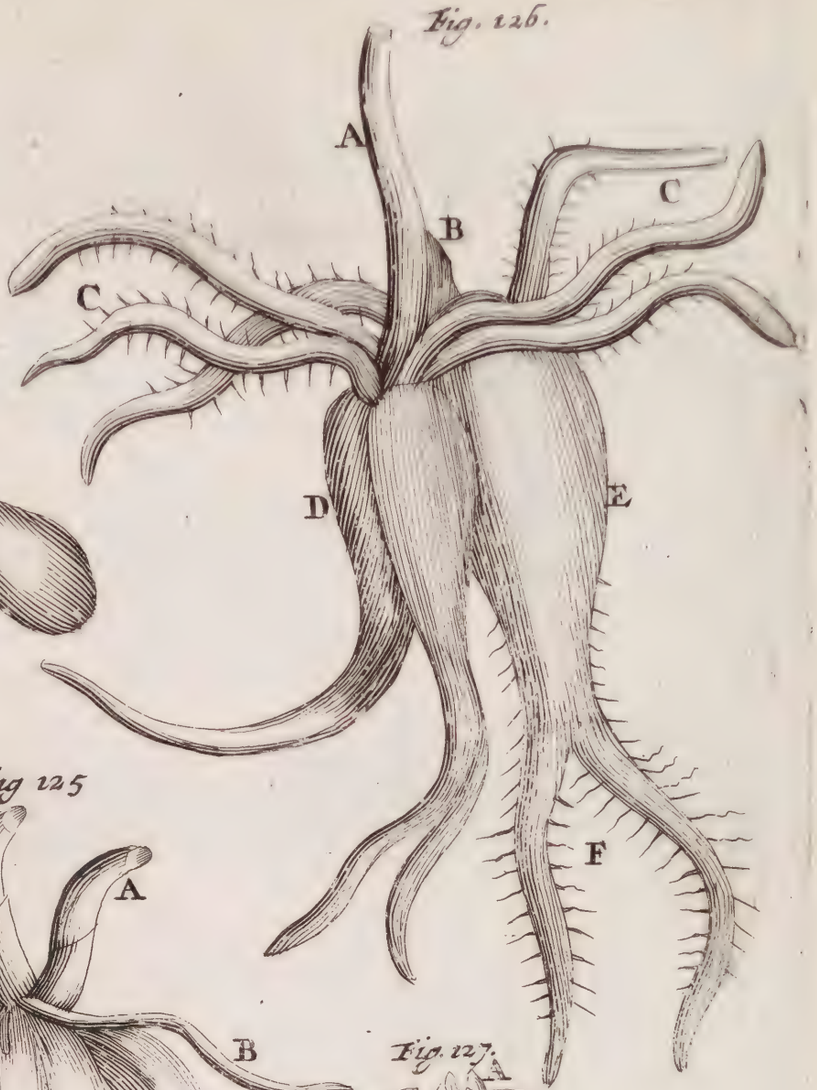


Fig 125

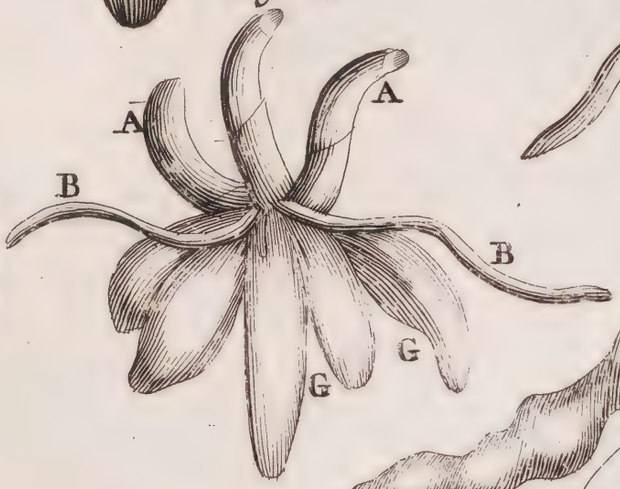
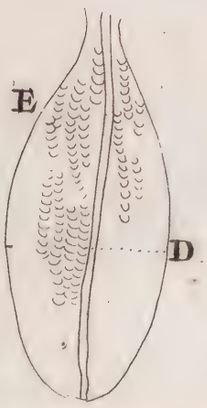


Fig. 127.



unt Radices *F* horizontaliter ductæ.

A

& oblongæ Radices *D* subrotundæ, & tu

& articulorum striæ *E* reliquum explent. Circa Septembris festantur, & teneræ, novæque Radices *G*, pilis consi

deprehendimus in *hortensi Ranunculo* [illegible] à cujus ma- To Ranunculo

Palma Radix (126.) pari proportione vegetat. Hæc caulem *A* à trunci

tur; intus vero candidis utriculis repletu

In *Anemone* (127.) appendices pariter trunco continuatæ quasi epi

[illegible] autem annotum *R*

delineare Radicem. Hæc à ligneo Ra

em verò rectis fibris motibus, & transversalium articula-

tracheas continent

Brevior;

Fig. 128.

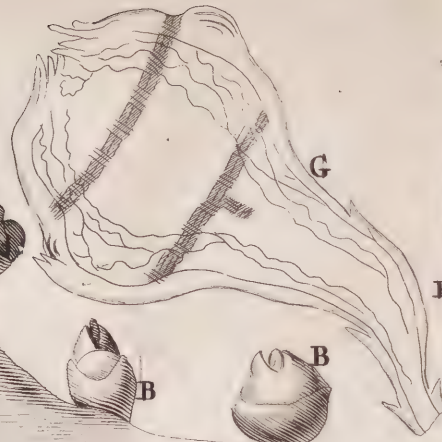
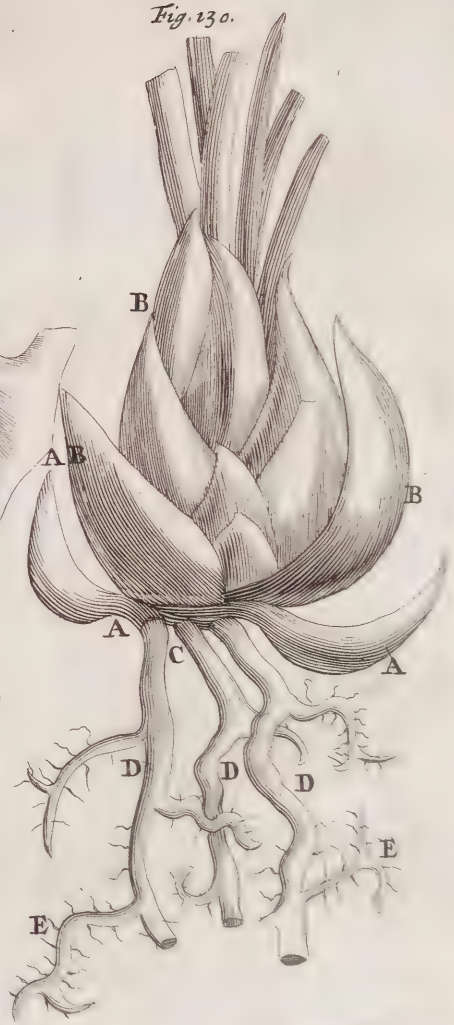
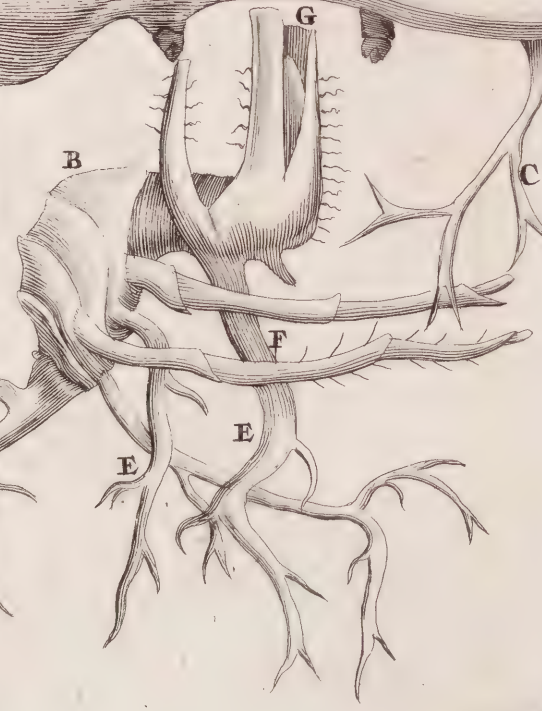


Fig. 130.





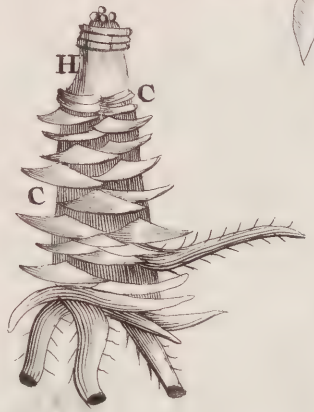


Fig. 129.

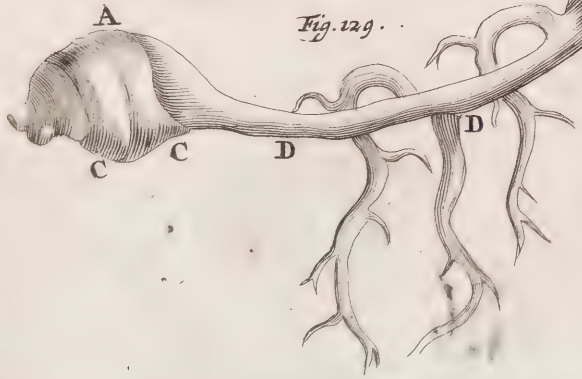
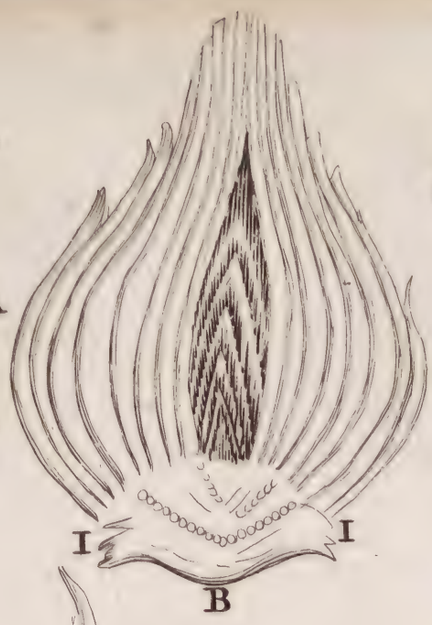


Fig. 132.



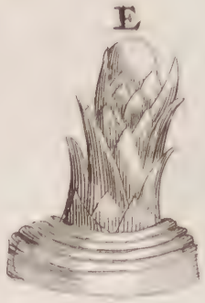
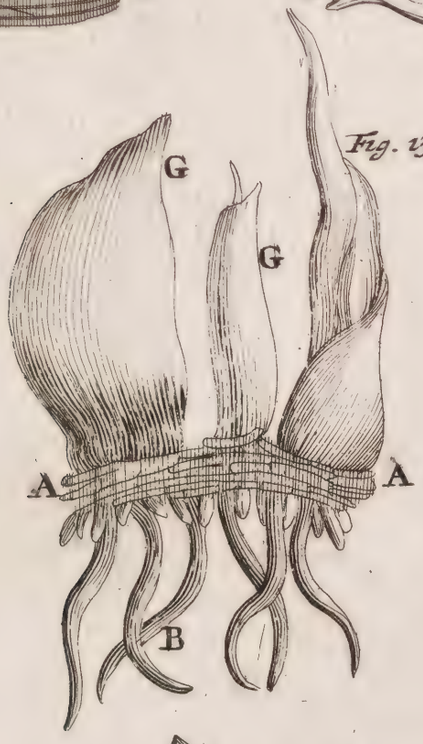
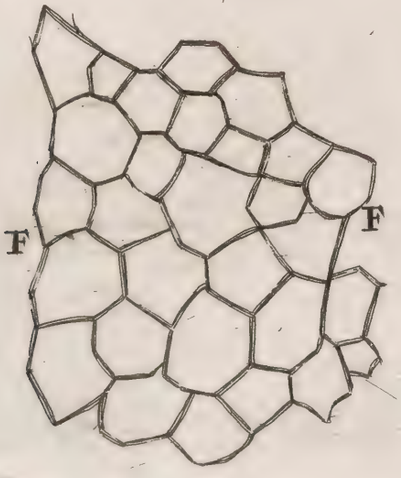
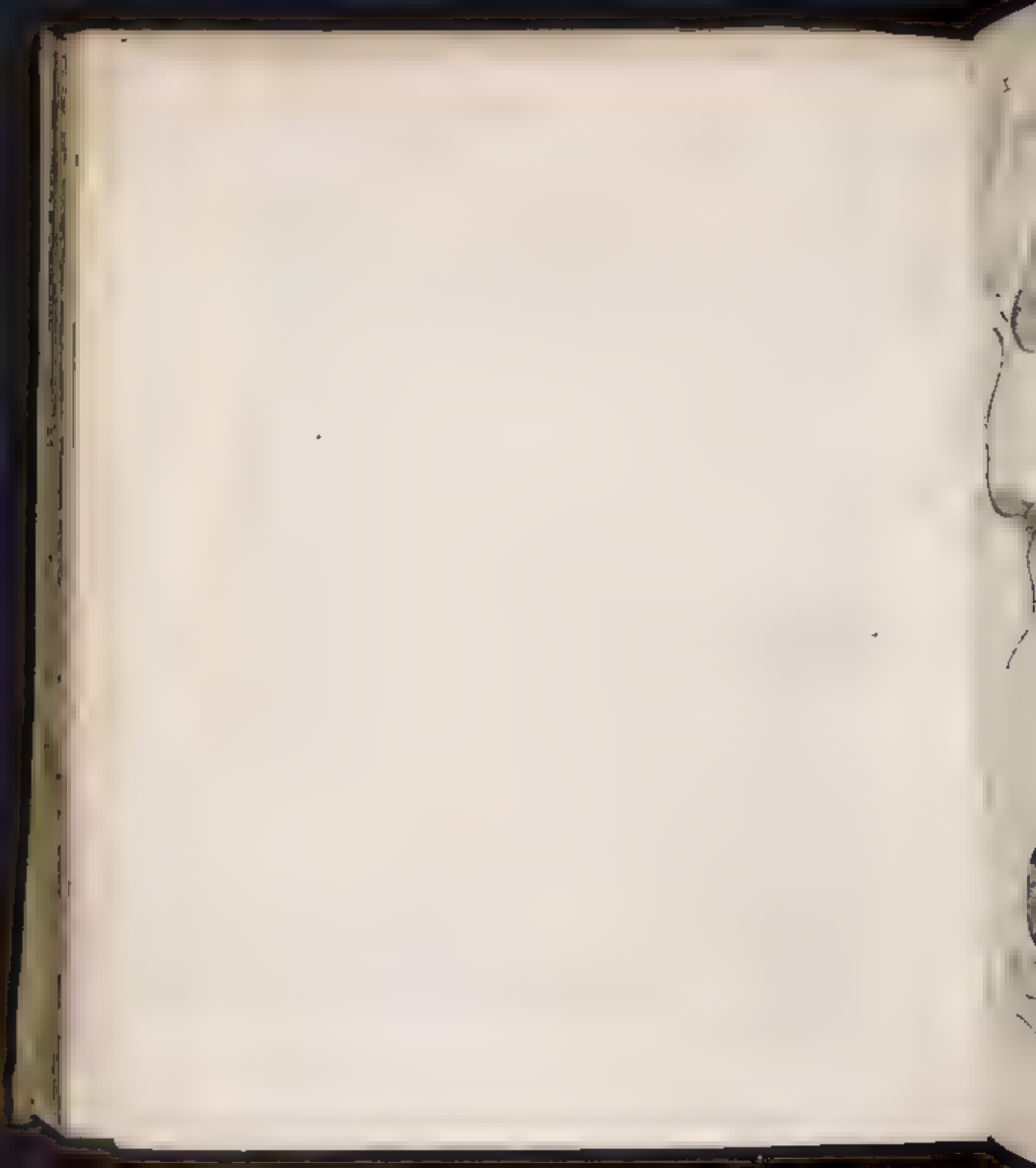


Fig. 133.







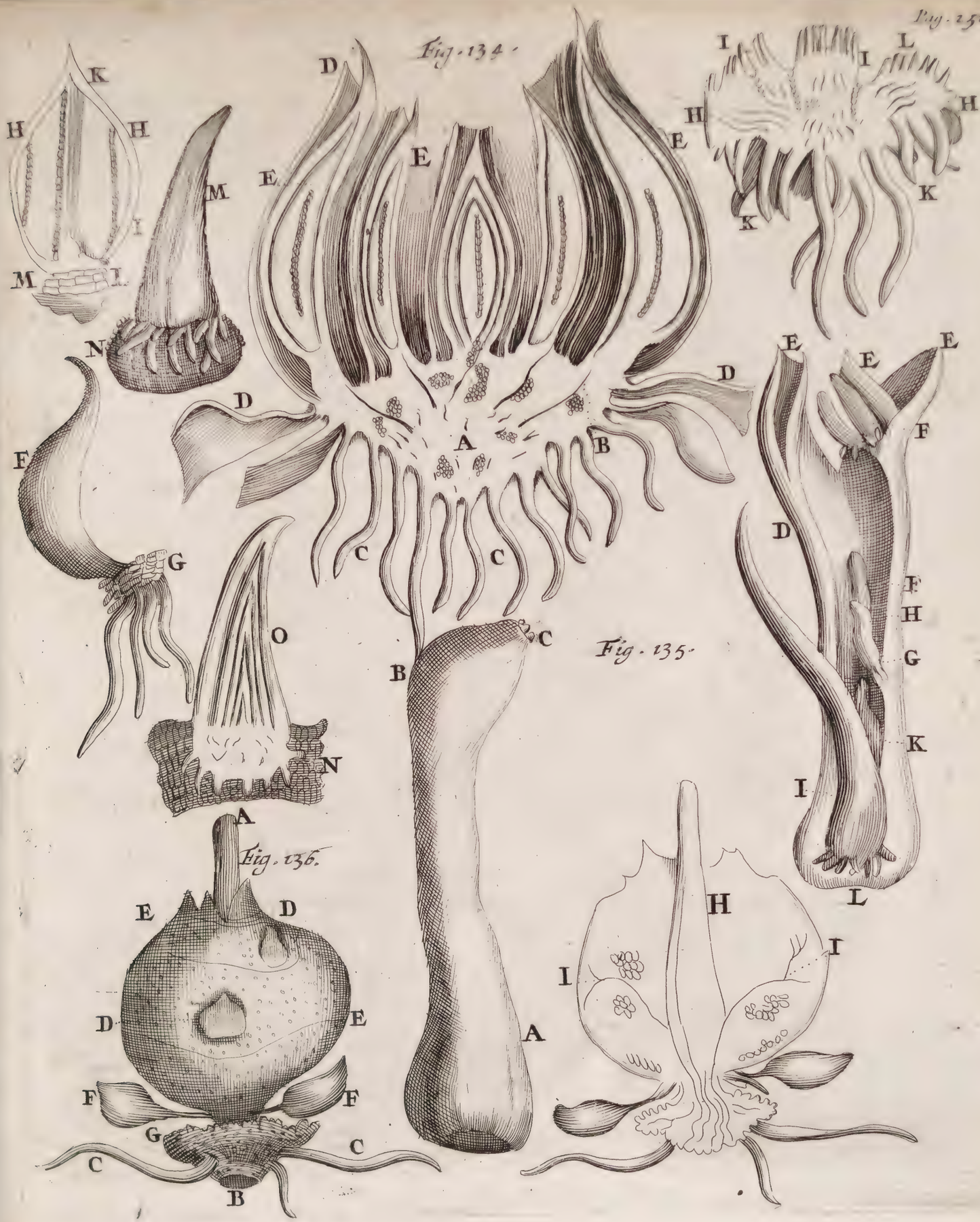


Fig. 134.
Fig. 135.
Fig. 136.
A
B
C
D
E
F
G
H
I
K
L
M
N
O

toto subjecta involvit folia. A trunci basi plura folia cuncta finem ætatis tabida collabuntur; unde cicatrices C superstant. Exaratus truncus, à quo singula folia A exortum trahunt, superius rotundus est, & in summitate D custodit, à latere antiqui caulis emergentem custodientibus, hisque avulsis, florem congeries. E occurrit; & quilibet laceratus totus F, sta Truncus B à latentibus novas fovet R ces I, fibrique, t eis & utriculis constat

Parem structuram in *barte* s *Cepa* (133., deprehen alis enim A coronæ instar loco trunci est; unde inferiùs R : circumeirca vero folia, In Cepa hæ ulfa, emergant, quæ crassa sua corporatura c , ambiunt: 1 um continua sese invicem amplexa corpus efficitur seu crassa componuntur. Primò namque cuticula occurrit, sub q , quod diversis valorum generibus co. A erumpentes, lurs tis, cuius centrum componuntur a chorem, quasi lac fundunt. A æ D, quæ alas affociatæ, delineatum æ replent. In exaratis arcis gneis fistulis productum, quo à cunt: fuis pariter s Radices K elo copiosis gemmis, quæ soboles quibusdam dicuntur, Allii corpus p gula autem patent, factâ per longum sectione. Inferiùs tgitur truncus A loc , utriculis, fistulis & hs dicm gracilia fun s occurrant, quæ invicem convo efficiunt, & quasi cauiem Quælibi oma propriâ constat formâ; quare- Externus quo

Hyacinthus. jus Cepa latâ basi, a qua radices emergunt, turgido atte

est exterius involucrum A, radiculas em
in apice C. hinc : sectum autem per I
taque involucrum, seu folium D concavum interiora versùs, varias

e folia, non à basi, seu trunco exoriuntur;
D parte, non horizontali; sed spirali
H, custodiuntur. A ba
, quæ suis partes tolius K
, seu caulis speciem in exiguis Cepis admirari licet,
rboribus ab exteriori ambitu erumpant : in his autem intra quasi
diantur Et sicut in vulgaribus Cepis, & bulbis inter se
subjecto trunco exoriuntur folia, ità in hac ab
inter appendices, variæ emergunt gemmæ

pendent; quasi divisorum truncorum, seu caulium vis adhuc man
es, quos Natura in diversa folia lacinias, percurrimus :
s et in bulbis, seu tuberibus quæ in communem corpus congiomerat, brevi
ouis varus assurgentem caulem A exhibet Inde ibi pendet antiquus bulbus B

fa, sola sibi
it : à basi pa

Fig. 137.

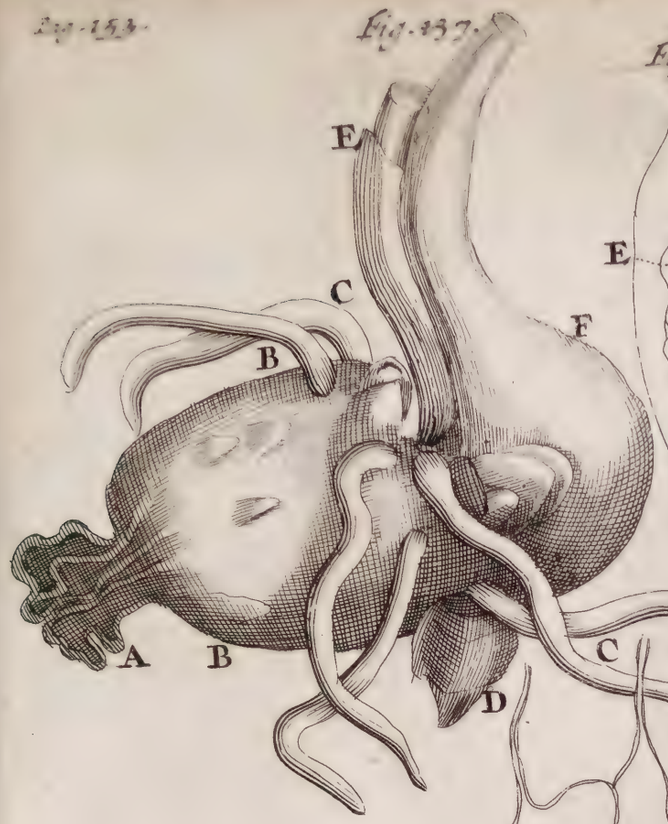


Fig. 139.

Fig. 140.

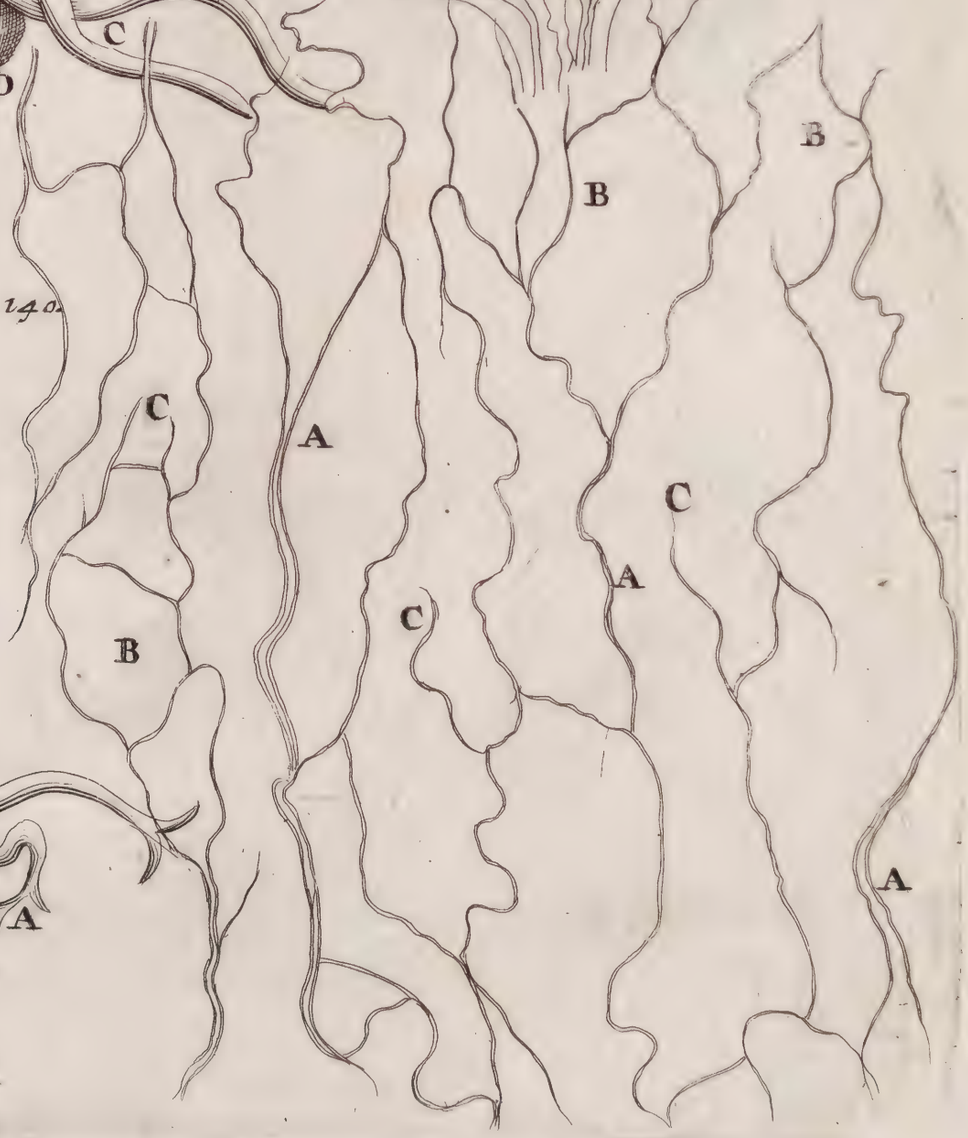


Fig. 138.

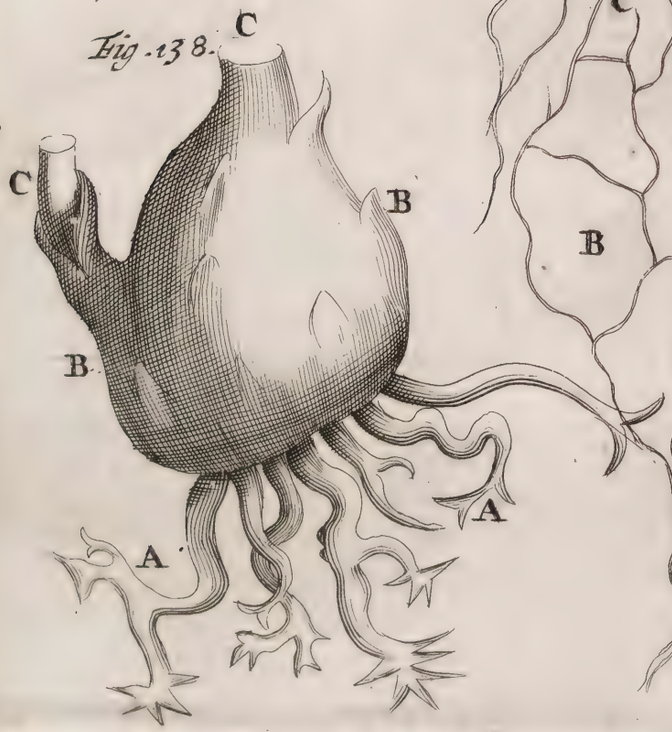


Fig. 141.

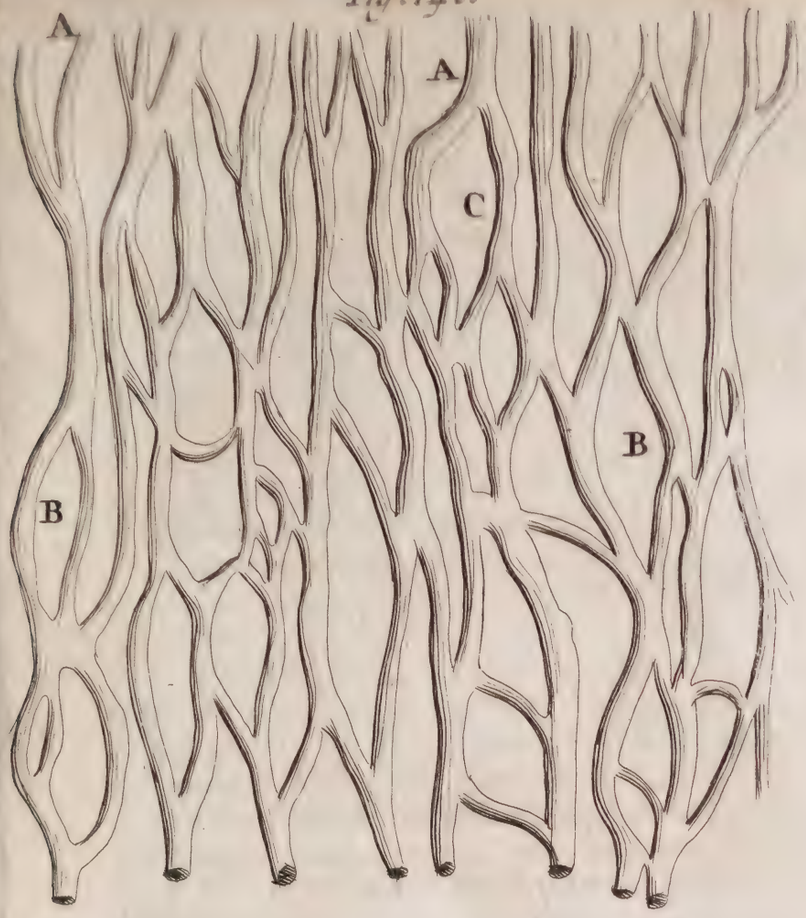


Fig. 142.

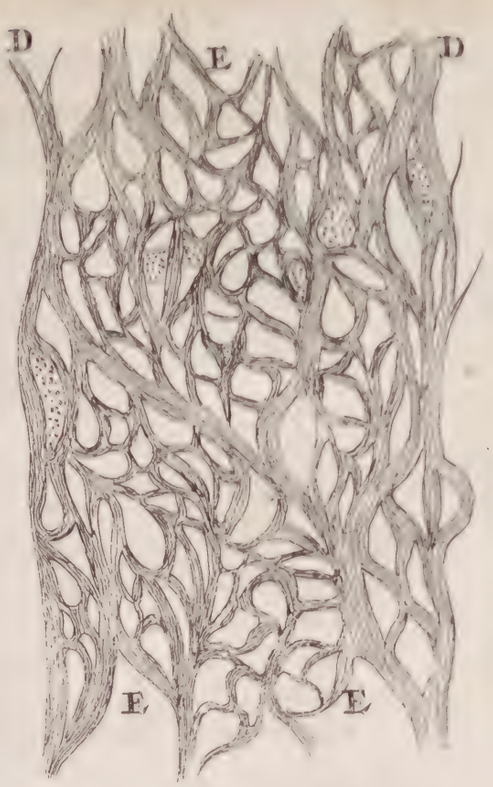
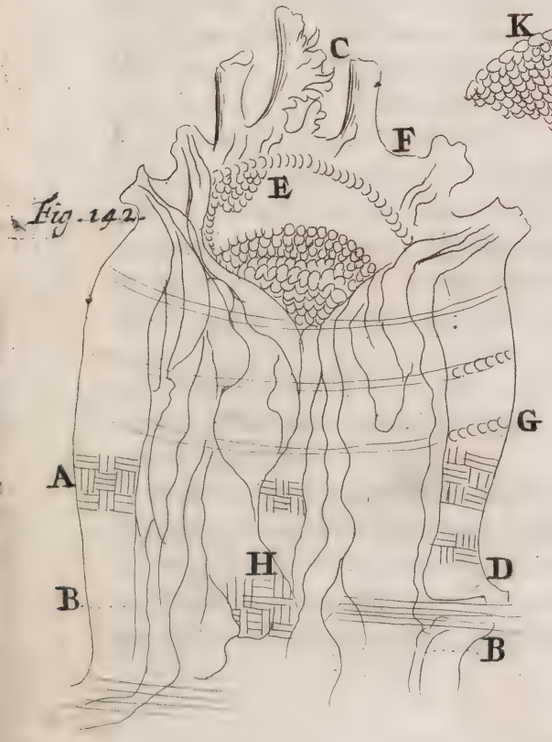
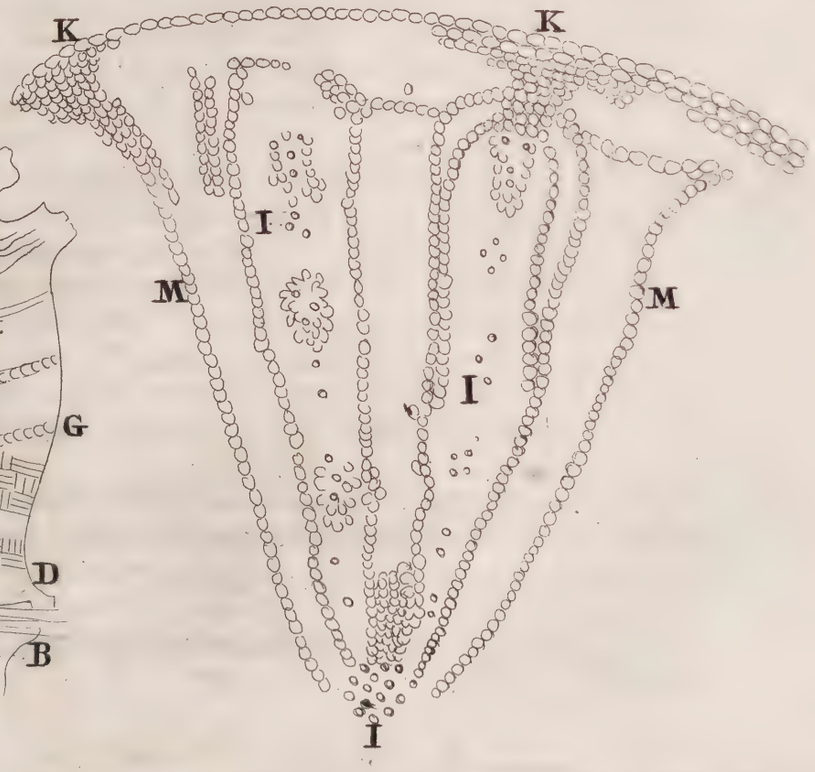


Fig. 142.





C[illegible]a autumnum vegetatione va[illegible] gemma, recepto à trunco, seu bulbo nutri[illegible]ore protuberat, sursumque erigitur, novatoq[illegible] [illegible]s bulbi succu[illegible]

Aron quoque (137.) in principio æstatis insi[illegible] ponit bulbo, seu tubere, à quo [illegible] Bulbus Aron

[illegible] involucro, crispo, corruptoque ambitur. Hæc circularem promit [illegible] [illegible]rupunt, quæ caducis foliolis, gemmarum instar, custo[illegible] diculo firmantur; quo lac[illegible] emancipatæ separantur. In apice caulis E attolli[illegible] mucosâ materiâ refertis contat unà cum fibrarum implicationibus.

[illegible] cosas promit [illegible] te à cuticula [illegible] & in gemmas derivantur: contenta verò bulbi interiori[illegible], varius transversalium [illegible]

[illegible] Raphano fig. 140. [illegible] li C deducuntur, qui in folia D, & caulem [illegible], fistulis ligneis (mollibus tamen) cum transversalibus utricu[illegible] ordines, varium situm F tenere videntur

[illegible] non raro varicosæ sunt, argenteóque pollent colore: in [illegible] Raphano fig. 140. [illegible] res vel quatuor numeratu[illegible] trachez [illegible] videre [illegible] ramunculationes. Ex variaque trachearum prodeunt[illegible], diversæ areæ B excitantur. Nonnullæ tamen tracheæ C relicto exteriori rete, quod sub cortice pericarpium, seu bu[illegible] carnem ambit; interius elongantur, & a iis reticularibus trachearum implicationibus affectantur: ità ut fiat colligantia inter omnia plana trachearum

Non minori implicatione gaudent ligneæ fibræ in eodem *Raphano* & *Rapu* (142.) fig. 142. [illegible] præcipuè in cortice lustrent[illegible] Plures fasciculi A sursum producuntur, quí copio[illegible] [illegible] communis fibulis, proxim[illegible] [illegible] [illegible] [

Viventium ordines N[illegible] quærant alimoniam; &[illegible] non unicâ contenta regione varias amant; ità ut motu orbz-

quibusdam plantis deprehendimus, [illegible] lent; à cujus lateribus & ex[illegible] In trunci, &

in bulbis & tuberibus evidentius patuit; in qu[illegible]

radiculis transductus, & proprius uterculus congelatus; adventante vere

ac mora fermentatur, & excoquitur:

ationem iterum inchoat, non dispari vi

nte accidit: in his enim probabiliter so

ntent, qui in horizontalibus

ore; qui in

dionibus ramis & trunco ipso custoditur.

Nec in vegetatione ipsa discrepant Radix, tuber & bul s, ab elongato in aere Radix, tuber & bulbus in

ores rami, & truncus ipse, novas in vere exerunt g , &

uteros prorumpunt

nquionibus) a tant. In plerisque herbis a basi pariter

es quoque emittunt; prioribus senium tabescentibus.

& .

e pertinentias congregatur: unde pluvialis aqua, veluti

percolata, solutisque mineralibus impregnata; proprio

prætiò sint & intrò pellantur.

& mutuæ, à Radicibus pendent. In plantato
entum non fo[illegible]m obtruncatas, & ha

prope

bus (urgente intus succo & aëre intra tracheas) Ra
dices promuntur. In furculis autem, ubi nodi vel a
stantur, Radices infra nodum eme ant; eò quia ad gemmas fibratum plexus derivatur, & angustatâ succo viâ ex fistulari curvitate, l
pio necessariò succedit: & i
Jumenti Vitis furculis non raro à tenel
bas Radices erumpunt ex tur
humore; qui in gemmæ molem ab
hescente.

Transductus itaque quomodocunq
Radicum, & bulborum horizonta-
libus utriculis, coacervatur; dor
culas erumpat; ver. sursum delatus,
in gemmas absumatur. Protuber

dix in plerisque plant

& custodi ri, ità ut ab externis aëris, & ventorum injuriis arceantur. Cort

& interiori ligno contiguâ: Exterior rarior
& reflexis componitur; intercepta verò spatia, interce
lorum se
xtu, & superc-

huc tenellæ, & rudes
custod tam: harum

bus ordinibus extendu ir, & succo ligneo profusæ fermin

vel, vel sub corbce m fasciculos di
gnum circumlocatur, vel diserminaris in

[illegible] inclinato orbiculorum tactu suspe[illegible]tur, donec adveniente novo m[illegible] & [illegible]-flione in superiorem orbicu[illegible]atur, vel in horizontales utricul[illegible]a derivetur. In animalium [illegible] quid simile inveniatur: non enim unus rectúsque tu-[illegible]

[illegible]mine alimentum, incubatu in sanguinis naturam [illegible], [illegible]one, adhuc alimenti, & auctivi succi productio vi præexist[illegible]s [illegible]; ità in plantarum incubatus ovis cotyledonum utriculis [illegible]

[illegible]gni, corticis, medullæ, & foliorum, ser-[illegible] alimonium evehit. Taliter concoctus hujusmodi succus ab exaratis utriculis in peculiare vas, rer[illegible] particulis affundi possit. Interpositæ tra[illegible]

[illegible]

vus

Quæ nam sit alimenti materia, & [illegible] vis restituat succ[illegible] & deorsum pro- [illegible] mento sancta [illegible] quoque sarculi infra sectionem contingit. Idem mihi sæpe [illegible]idit, factâ spirali sectione in Pomis & Prunis. Hoc unum peculiare observavi in hujusmodi parte, non longè secucet à sectione, quod [illegible]rdum plures gemmæ [illegible] erumpant indiscriminatim, quæ in [illegible] mole in sarculo ultra sectionem dub[illegible]tas est nutritium succum à superioribus par[illegible] vum involucrum erogant. Portio quoque succi, qui [illegible] erupe[illegible] corticis auctione, & novâ [illegible] omnem a[illegible]monjam, aut [illegible] truncum, & ramos ex[illegible]s propagat[illegible] namque corticc, pe[illegible] nentum, quasi al[illegible] gusto, & arcto loco, laxa[illegible] era dilatari posset: unde hærendo, n[illegible] promovere [illegible] neatur; certum est nutritionis augmentum [illegible]sequi in relicta corticis [illegible], & in

[illegible] motiores etiam ad interiora promovent.

[illegible], & aucto quocumque tempore contingat. Mense Maio in ramo

[illegible] exhubuerunt: Septembris quoque mense plures arbore[illegible] &

[illegible] & [illegible], & [illegible] & [illegible] & [illegible]

ramum man feliæ

tantibus terebinthina fanditur. Quin lumbi in animalibus, & præcipu
circa nates Natura glandulas in cute locavit, Hæ vate excremento

multis recollectus, qui per exaratam
pilum foras exit lat, &
juras im
intestato ovario, ve
, ova, seu femina edantur. Horum partes, folia semicet, tenellio
ant, & una cum flammulis, præpar
& in uterum capturum succum deparant: & ubi ferax est flammarum eru
Catapotia majore, & in Caltaneis errans quasi Natura
Interd , , & ovorum, farcinis à
forgit, plumbus foliolis di ova intra ovarium, vel
percolatis ab
ib excitata, & com ta
pla , &
talis gemmis prædit , &
Interdum uteri tegumenta petrinco succo ossea redduntur, vel
lignescunt. P re plantarum ova, statu tempore incubata, fœ-

ovis peragatur; vel fabam Radicum, & Quæstio Au-
uas: an verò terra planè fœcund semine, familiares generationem
quoddam dubitatur. Pro h m investigatione,
lusi, cujus ombelo mul
mmino planta vegetativ
dum ossibus passim succidantur, & mactantur, sed
id fovendos, enutriendósque insectorum præcipuè fœtus dam-
e, facto ad u ex inflicto vulnere, in dantarum viscera con-
dunt ova; quæ sui pra , &
tur tumores: & turbatâ partium directione, atrophia succedat,

vel loco fortuitorum monstruosæ subornantur appendices, quales sunt diversa gallarum genera. Humor etenim, qui ex Naturæ legibus compagem gemmæ luxare debebat, elongando tenuiora, ex acerris vasculis & ex terminorum angustiis & effractis redditus, innatis fertiles appendices exoneratur, & assumit undequaque fibras, qui parallelo longo exterendi debebant, pro tam prædicto assumpto ex vasculare, & condito ovo ad latera evolvitur & tenuem rectitudinem affectat, femicircularem efformant unde unum sphæricum gallæ corpus exeunt. Interdum non tota vitiatur compages, morbique humoris juvet iura sed progrediente vegetatione, monstruosus quidem excrescat tumor, a quo tamen naturalium partium inchoamenta erumpant.

Quomodo plantarum moles a radicibus firmetur & plantulæ evolvi possint.

Tota plantarum moles, quæ caule, vel caudice assurgit, radicibus, tubere, vel bulbo terræ conditis, firmatur. In bulbis, & herbaceis, solet frequente Natura caulem attollere, & simul non longe novas emittere Radices, quasi ne vis ad vegetandum per gemmam sursum erumpat, parte vero deorsum sese exerat, & fere semper ab horizontali linea declinant Radices. Idem accidit in plantulis, in ovis vegetantibus. Probabile namque est, vi aeris ne ob intra tracheas, gemmas sursum erigi, & in caulem attolli. reliquum autem impetus intra exercetur intra radiculis, ita ut nec attollantur, nec perpetuo perpendiculariter deprimantur, seu media via non parum obstante vi subjecti soli producantur.

Exigua hæc à tam vasto Naturæ penu selecta, dum, Amice Lector, disquiris, ex *Sophoclis* præcepto, alienos eam, & reliqua a Superis optanda precibus obtinere contendam.

F I N I S.

EPISTOLÆ
quædam circa præmissus Tractatus

De Anatome Plantarum

Ulrovi citroque à Malpighio & Oldenburgio Scriptæ, in quibusquoque Observationum de Ovo Incubato, aliqua fit mentio.

I.

Clarissimo Viro

Domino HENRICO OLDENBURG
Soc. Reg. Angl. Secr.

MARCELLUS MALPIGHIUS *Salutem.*

Tuæ Anatomen * Anatomen, cujus in indice me jucundum insudasse alas te monet, tamen in adversum uniformis congressum vereor, Vir Clarissime. Hanc (si tantor in veterum, congressum non aliquam asperas) Regiæ Societati meo nomine exhibeas, rogo. Quæ sincerum mihi aperire sensum ne temnas. Si enim aperta meos meo judicaveris labores, corpus agrotantibus perpetuo fessum conquiescere fecisse. At si non omnino inutiles judicaveris, reliquum vitæ in hoc perficiendis mentis, prout mentis, corporis & fortunæ tenuitas permittet. Alium de expansionum fetum quamprimum transmittam. Diu vivas, & mea studia fovere non desinas.

Datum Bononiæ Calend. Novemb. 1671.

* Hæc est dissertatio de ovo incubato, quæ Regiæ Societati exhibenda abs te erat commissa.

II.

Celeberrimo Viro

Domino MARCELLO MALPIGHIO
Philosopho & Medico Bononiensi

HENR. OLDENBURG *Sal.*

Scripsisti illud tuum, Anatomes Plantarum Ideam complectens, quod Amplissimus Rex noster apud Venetos mandatario huic transmittendum commendaveras, vir mihi tradendum quoque nomine Societatis Regiæ exhibitum fuit. Cum illa partem ejus sibi præ-

legendam et [illegible] reputarit, [illegible] pubblicâ cynosuræ festiv[illegible] [illegible] [illegible] [

[illegible] fundamenta [illegible] [illegible] [illegible]

V.

Clarissimo Viro

Domino HENRICO OLDENBURG

Soc. Reg. Secretario,

MARCELLUS MALPIGHIUS *Salutem*

Plurimum mihi utroque in Incubatu Ovi rerum evapo[ra]tione observatum, & in adumbrationis seriem ad Te transmittere placuit, si id rerum inquisitioni quam amicitiæ tuæ mereri habeas. Rude igitur hoc compendium inter otium perscrutabis, idque, si non indignum Regiâ Societate censeas, meo nomine ipsi exhibere ne graveris. Scio, perpetuo & gravioribus curis Socios adeo detineri, ut in evolvendis Annuarum Observationum moli[bus] tibi plures omnino tempus non vacet.

Jam accuratissimam Plantarum Anatomen præstat sine vir Dominus Grevius transmissam acceptam, & pro tanto munere debitas tibi gratias ago. Doctissimum opus, amici ope, in Latinum versum pra manibus habeo, & licet plerasque, ob minus exactam Interpretis peritiam, mentem meam tegant, præcipua tamen Authoris inventa tenere me puto. Gaudeo interim, me rem [gratam] Summo Viro in quamplurimis observationibus & placitis convenire, [ut] quamvis, an quibus intercedere aliquid diversitatis videtur, ulteriori explanationi [reservare] decreverim, ne, quæ tanti viri aciem effugêre, illusione quadam a [mea] manu imponantur Naturæ. Vide in Laudato opere varias Animalcorum [species], Ovi Semina & Folia, judicari sententia. Libenter scirem an hujus modi jam Ippis edita fuerint. Valeat interim diu felix. Dabam Bononiæ die 8. Octobr. 1672.

Responsum ad literas binas prox me præcessit annexum vide *Dissertation. Epistolic.* de FORMATIONE PULLI in OVO a *Malpighio* nostro ad *Reg. Societatem* script. editionis nostræ tom. secund. pag. 65 & [illegible]

VI.

Clarissimo Viro

Domino MARCELLO MALPIGHIO

Philosopho & Medico Bononiensi

HENR. OLDENBURG *Sal.*

Magnopere gaudet Regia Societas, [illegible] tua Te Studia circa Plantarum Anatomen [illegible] pro[illegible], [illegible], & fallor admodum, laborum Tuorum solutem [illegible] Cereum, [illegible] quo elegantem Tractatum præ-

præ-

prælo brevi exituram ſperamus. [illegible] Opera Anatomica [illegible] prodierunt, [illegible] Anatomen [illegible] Opera [illegible], [illegible] Tuorum [illegible]

[illegible] Mediolanenſi [illegible], unico [illegible]. Ægre ſane ferimus Bibliopolarum [illegible] quæ ſola evenit, ut virorum doctorum ſtudia & laborum nimis ſero fructus [illegible], aliquos quidam, in Muſica tum theoretica tum practica apprime verſatos, [illegible], ad tum ſyntagma muſicum in lucem emittere. Intra [illegible] prodiit hoc quando accedet, [illegible] operis copiam fibi fieri, cujus vota quæ poſſim [illegible] poſtulo, [illegible] in noſtra.

Præ cæteris tam ſunt Illuſtrissimi Boyl[illegible] observationes & experimenta de Effluviis, de Emanationibus [illegible] & [illegible] ſuo tempore commodam occasionem nactus, ad Te tranſmittam. Jam [illegible] quæ [illegible] Wallisius de Mediis inter-tenis in [illegible] operationibus [illegible] jacula [illegible], reliquis ipſius laboribus, ut audio, hoc ſignificavit [illegible].

Opera, [illegible] mihi [illegible], quæ non tam prodierunt, [illegible] tam diſſ[illegible] eſſent. Exemplaria ipſi concredita brevi ad Te curaturum; [illegible] quæ [illegible], quæ paratos intra dies Venetias conſcendet, alia nominilla. Tibi hanc [illegible], [illegible] [illegible] Accepimus, nec [illegible], nec [illegible] [illegible] [illegible] ingenius nuper edidit Tractatum [illegible] Mortuorum motu, ad Horologia aptato, Marottus Diatribam de Percuſſione & [illegible] Lucidus, de menſura Terræ: Claudius Mallet de Chales, Elementa Mathematica tractavit, Terram ſcrutatur, Aquam, Aërem & Ignem. Alii alia parant, de quibus ſuo dubio propius edoceberis. Vale, & me Tui ſtudioſiſſimum amare perge

Dabam Londini d. 7 Junii 1673.

VII.

Celeberrimo viro

Domino MARCELLO MALPIGHIO

Philoſopho & Medico Bononienſi

HENR. OLDENBURG *Sal.*

Compluribus abhinc vetrò menſibus, exigua ad Te expedivi Diſſertationem tuam de Ovo Exemplaria, typis Lovanienſibus edita; Illuſtriſſimique Boyliî egregiam de Gemmis Diatribam adjunxi. Curam eorum ſuſcepit Excellentiſſimus Regis noſtri ad Portam Ottomanicam [illegible], Dominus Finchius, qui terrâ hinc in Italiam profectus ſuccinctè mihi poſtea [illegible] aperuit, ut ad manus tuas Exemplaria ſua rite perveniant. [illegible] tempore [illegible], [illegible] [illegible], [illegible] adeptus, [illegible], [illegible] [illegible] [illegible] propterea, [illegible] perſeverandi [illegible] diſſi.

[illegible] Radicum imprimis structura, deque Vegetandi ratione, praemissâ [illegible] quorum omnium nullam Tibi partem dissimu[illegible] [illegible] quam primum commode a Te [illegible] [illegible] [illegible]

perlegi. Incensum pariter Cl. Willi- librum præ manibus habeo, in quo permulta digna invenio, & tenebris convulsa, præcipua vero è brutorum Carnearum conformatione Arcanas, quem non tenues in totum, præcipue Ovis, & Simiæ jam. Proinde agitur; & tuam mihi perennanti benevolentiæ, ex meis tenuibus gratiis. Plures epistolas (& fortasse libros ad e datas interisse puto, & præsertim Domino Mag- rum de Anno, Monstro eundam Excmi Legati vestri, eodem anno Londinum profecti, commissum. Plura etiam ampli- Dod- grom ope transmittere, ad me devenisse minime dubito, sine nec postremas meas literas, quibus exemplaria de Ovo me accepisse nuncupabam. Decessum Cæsareæ Epistolam, ejusdemque librum Domino Boccomo traditum adhuc desidero, & reliquarum, quotcunque mihi fuerunt, peregrata mihi, ac futura.

Sextus jam excurrit mensis, ex quo Exc^mus Abrugiæ, Venetiis moratur, Anatomiam Plantarum cum Iconibus recepit, ut tuâ occasione ad Te transmitteret. Hanc tamen Tibi redditam fuisse necdum accepi. Valeas, quæque soles humanitate & amore me prosequere desinas.

Datum Bononiæ d. 5. Februarii, 1675.

X.

Clarissimo Viro

Domino HENRICO OLDENBURGIO

Soc. Reg. Angl. Secr.

MARCELLUS MALPIGHIUS *Salutem.*

Hæc epistola ut videtur incepta ante priorem præcedentem, sed ea cum ipsa simul missa Bononiæ anno 1675. ad finem, quæ hoc Anatomes Plantarum opus vocat.

*En Tibi, Vir Clarissime Plantarum Anatomes pars potior, una cum promissis Iconibus, seriès quam dudum transmissis, ita cogente adversâ meâ & aliorum valetudine. Invitus enim à præsentio agrotorum curationibus absum, unde corporis & animi vehuntur cruciatus. Interea dum pectoris Exercitationem, si juvet, Regiæ Societati meo nomine dicatam dare cures. Non dubito, quin in hoc etiam demeruisse, quam in re tam arduâ à doctorum cordatis judicibus subrumpetare vellem. Si forte Exercitatio hæc, Societatis judicio, [illegible] exciderent, ut rumpantur olim Epistolæ, * cujus exemplar mihi de- [illegible] quæ tua mihi perpetuâ [illegible] edenda ve- [illegible] Regiæ circa Callos Vegetationem, & Radices, cùm omnes Icones necdum sint in promptu, in aliud differo tempus.*

Doctissimi Domini Crevæ liber nondum ad meas devenit manus, cùm D. Bocconius adhuc in Belgio moretur. Lituntur ipsius meditationes & observationes admirabor, imbique pergrata erunt epistolæ, quas eum ad me dedisse asseris.

Exercitationes meas Tuum in Ova generationem transmissa exemplaria ex gratia favore Excellentissimus Equitis Henrici Coxæ, cæpta meditationes revolvi, tibique interim quas debeo gratias repensare. Faustum annum Domino Deo Lucum non parce precatum me dum mihi tecum arctiora percolere, præsertim inventis perspicuis, ingeniosaque Experimentorum Inventa, tumque stylum conspicio. Vale.

Dabam Bononiæ d. 20. Augusti 1674.

XI.

Celeberrimo Viro

Domino MARCELLO MALPIGHIO

Philosopho & Medico Bononiensi

HENRICUS OLDENBURG *Felicitatem.*

Temperamentum latitiæ meæ vix invenieram, quando post Te Jacobum quinquemestrem, annua quæ, ob infidi maris discrimina mensis aquarum, præcipuum tuum munus Philosophicum manibus meis volumen evadavit, eorum die Januarii 28. 1675 quo mercator Londinensis datam de coronamento Isidem observavit, Ego Societati Regiæ, earum publicum tunc celebranti, ipse exhibeam. Illi, usui ubertatem hujus præstant ac, toi tamque egregii Iconismi gratia, unanimes de te retexere, tum ut nominis tui nomine gratiam Tibi referrem cum, tum ut Opus primum ipse ac per te possit exarari mandarem, tot vero Tuum opus quantum sit exponerem. Ad hæc vota adhærere illegitima mihi, ut quam, qui mihi, tuique me primo de Legatione provenium literata valetudine perfruere commendarem.

Reliquum jam, Vir Consultissime, hanc, qua tecum Ea mihi nunc est familiaritate, gratiam, ad quam me mandabam, qui eius tota mihi causa dignus tuis meritis esse possem, exquirentis inquirendo ad emendandum vitam [illegible]. Ad quam [illegible] te, quibus relinquam me ad [illegible] ad communicandum [illegible] Experimentum [illegible], memoriæ meæ [illegible] Regiæ Societatis Academiam præstare, ad [illegible] majorique industriâ ad nominis tui immortalitatem contendere,

Cætera hoc Tecum expedire tempus, quod ut tam præcautæ [illegible] quæ [illegible] per partes edita fuit, quod [illegible] ut quæ [illegible] per [illegible] pari studiosæ [illegible] ex [illegible] pressione cum animarum [illegible], [illegible] nunquam intermoritura decus certe certius Tibi concilabis, [illegible] mensum duplet [illegible] Tu, [illegible] Naturæ Compagines, [illegible] penetrare gnaviter perge

Dab. Londini 8 Id. Febr. MDCLXXV

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MARCELLI MALPIGHII

Philosophi & Medici Bononiensis,

È

SOCIETATE REGIA,

OPERUM

Tomus Secundus.

Quorum Elenchum sequens Pagina indicabit.

LUGDUNI BATAVORUM,

Apud PETRUM VANDER AA,

CIↃ IↃC XXXVII.

CONTENTA
TOMI SECUNDI.

Dissertatio Epistolica de Bombyce.

Dissertatio Epistolica de Formatione Pulli in Ovo.

Epistolæ quædam, Circa hanc de Ovo Dissertationem, aliaque ex occasione subnata argumenta, utro utroque scriptæ. cum Appendice de Ovo Incubato.

Antonius Felix Alberti Marsilii de Ovis Cochlearum, Epistola, ad Marcellum Malpighium Carolum Jac. Hardeni Epistolæ aliquot de Partibus Generationis Cochlearum. De Generatione item Insectorum ex Ovo, ad Præfatum Abbatem, & Lucam Schrockium.

Exercitationes Anatomicæ { de Cerebro / de Lingua } Marcelli Malpighi & Caroli Fracassati.
de Externo Tactus Organo.

Dissertat. Epistolicæ { de Cornuum Vegetatione. / de Utero & Viviparorum Ovis.

Exercitatio Anatomica de Omento, Pinguedine, & Adiposis ductibus.

Exercitationes Anatomicæ de Structura Viscerum, Nominatim Hepatis, Cerebri Corticis, Renum, Lienis.

Dissertationes de Polypo Cordis & de Pulmonibus, accedit Thomæ Bartholini de Pulmonum substantia & Motu Diatribe.

MARCELLI MALPIGHII
PHILOSOPHI & MEDICI
BONONIENSIS

DISSERTATIO EPISTOLICA
DE
BOMBYCE.

Cum figuris plus 54. in Tabulis XII.

SOCIETATI REGIÆ,
LONDINI

Ad Scientiam Naturalem promovendam
institutæ, Dicata.

PRÆFATIO
AD
LECTOREM.

ANnus nunc agitur unus alterve, quod Physicæ Experimentalis ornandæ augendæque gratia, inter alios, per Literatum orbem sparsos, Viros Celebriores, Clarissimum Dn. Marcellum Malpighium, Philosophum & Medicum Bononiensem, inque Messanensi Cathedra Medicinæ Professorem Primarium, ad colendum cum Nostratibus commercium Literarium, eáque Nobis, quæ per Italiam & Siciliam occurrerent in Naturæ scrutinio observata, communicandum, ea qua par erat humanitate invitabam.

Mirum, quantâ animi lubentia invitationem hanc amplexus fuerit Malpighius, quamque cordatus exinde suam in conferendis Symbolis promptitudinem, literis non unis ad Nos exaratis, testatum fecerit, addito imprimis argumento hoc luculentissimo, quod eximiam, cui hæc præfamur, de Bombyce Dissertationem, egregiæ doctrinæ & curæ elaboratam, Regiæ Societati, (quæ eam, materiæ nomen si minus scriptam, prælo dignam omnino judicavit) pro singulari suo in Ipsam affectu, inscribere & dedicare voluerit.

Ominari profecto hinc licebit, etiam alios aliarum Gentium viros doctos & sagaces operam omnino seduam navaturos, ut gemmas de aliis argumentis Physicis Observationes ad locupletandum Pene

Experimenta comparatas, summâ, quâ fieri poterit, curâ & fide congerant & juris publici faciant.

Credibile vix fuerit, siquidem eo pacto omnes Nationum portarum Mentes Illustres unanimi consensu in tam Nobilem sc. tradere cuncta vellent, & Ingenia, Opes & Operas ad indagandam Vim Naturæ & abdita illius eruenda Mysteria consociare, quot & quanti momenti Arcana prorumperent, per quæ se Mundus agnosceret, intellegeretque, quantam Materiam & opportunitatem rebus à se conditis indiderit Sapientissimus Author, quamque Universum hoc abundet rebus, quarum adquisita Cognitio non Humanæ tantum Naturæ eveheret dignitatem, sed & Humanæ Vitæ commoda quam maxime adaugeret.

Libellum ipsum quod attinet, nolumus equidem amplioris Præcognoscendi judicium Lectoris antecapere: Id potius rogamus, ut suam de eo sententiam, usque dum evolverit & perpenderit totum, differre, quæque deinde ipsi in Historiæ hujus amplificationem subvenerint, in medium conferre velit. Vale, Lector Amice & Tui Studiosissimo fave.

HENRICO OLDENBURG,

Soc. Reg. Secr.

MAGNÆ

MAGNÆ
SOCIETATI REGIÆ
ANGLICANÆ,

MARCELLUS MALPIGHIUS S P

Umbrarum Hi[illegible] que censeretur, siquid vel minimum ex ipsa, vestris d[illegible] pro magna Physicæ instauratione (quam sedulo moli[illegible] [illegible]arum cum *Bombylimen* [illegible] propositi Insecti [illegible] ictibus, vel potius [illegible] certum est, Planta- Prima hom[illegible] [illegible], mox Br[illegible] [illegible]ritis horrore in[illegible]

Pelibus, & [illegible]

[illegible]tum commodis fat pro[illegible] [illegible]libido diu se continuit, sed posthabitâ prin[illegible] [illegible], eorundem Brutorum vellera detonsa [illegible] bus texendo, imp[illegible] [illegible]eratque ipsa [illegible] [illegible]am tegendi vis ad har[illegible] [illegible]ctus quod inta- [illegible] ad nova sibi menda stamina gannirent. Inter ha[illegible] [illegible]n apud *Indos & Seres*, teste *Servio*, campestri quadam [illegible] etorquere, & [illegible] tanto fuit pretio Se[illegible] [illegible] Postren[illegible] *Ex unum* de tuis ovis, ib[illegible] tumque Regiones divag[illegible]

Lyn[illegible]

Ovi mutationes.

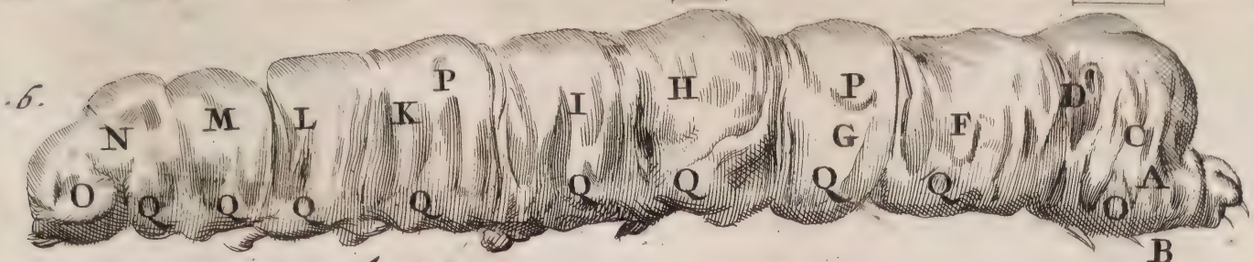
Bombycem promit. Dum [illegible] ubantur ova, Cærulea ex Violacets, mox Sulphurea

quin nec perforati corticis superstant protegentia.

[illegible], & cibandi norma, non pa-

Fig. 1. Fig. 2. Fig. 3. Fig. 4. Fig. 5.

Fig. 6.



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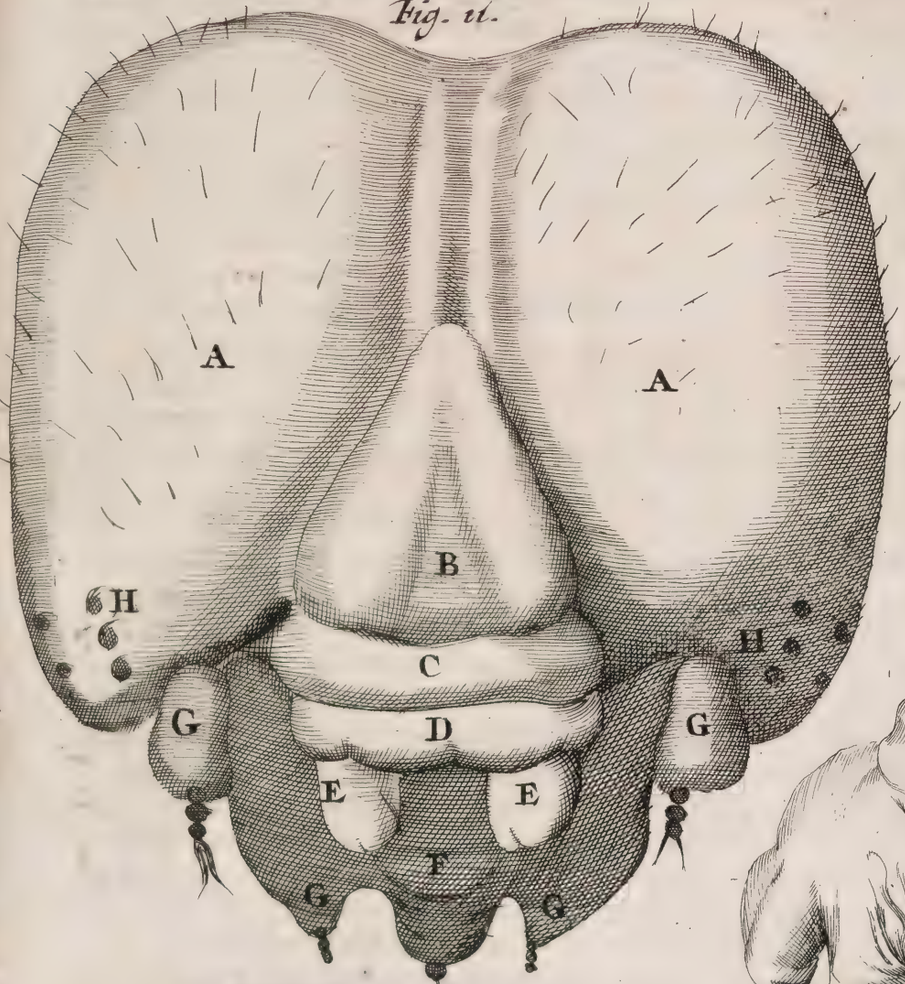

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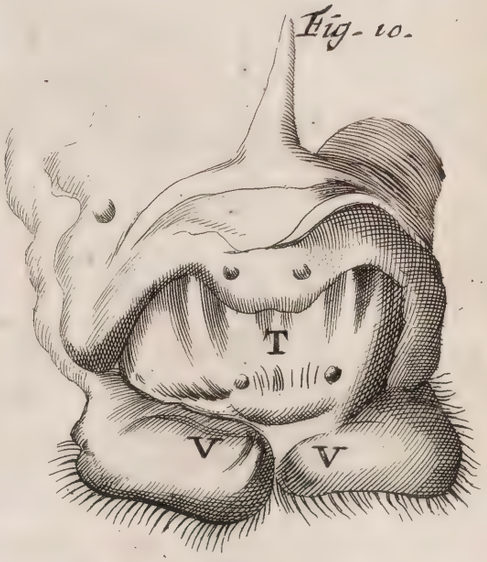

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Fig. 9.

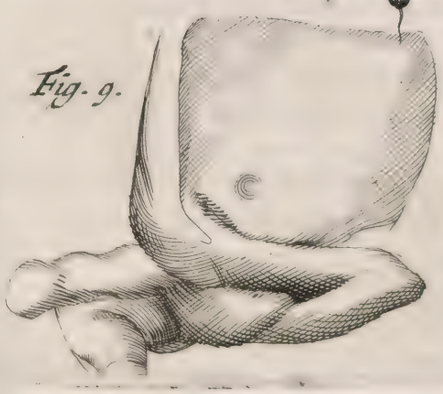


Fig. 7.

BB

Quamdiu

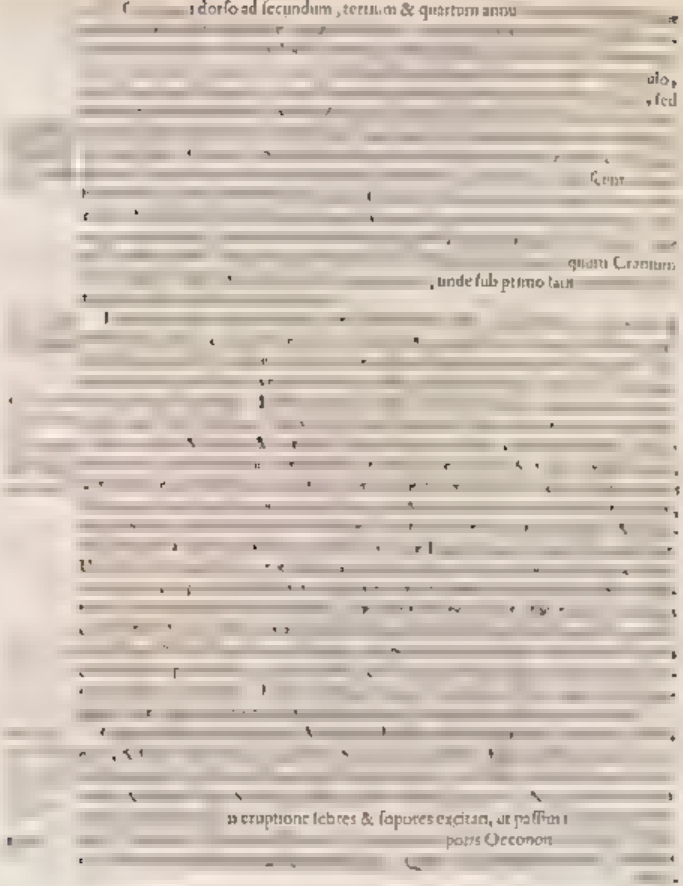
ſum immutatu

atem, admo delitescat.

nec nisi in summa inopia nigra offeruntur folia, adulto et

nera Rubi sona.

ludque durat per diem integrum cum dimidio, & no



[illegible]

transactis horis apponit oleracea folia, quo in extremos fines tenella adhuc dentibus degustare tentat, sed excitato forte dolore [illegible] iterumque decumbit per diem hyemalem bo, quo tractato demum reuertitur

[illegible] is *magnitudine* tria est, quæ h[illegible]

[illegible] Zinphina est [illegible] candémque colorem possidens pedes & am appendices compositæ per transversum pilæ in motu emin[illegible]ic, ut iam novum animal, exoriri novitatis ratio, quæ *Bombycem* à priori *Eruca* Differentia

[illegible] diversum efficit, in eo [illegible]

[illegible]

[illegible]

[

[illegible] appenduntur corpuscula.

[illegible] non erumpunt, rotunda est, in humiliori autem ver-

Annulis

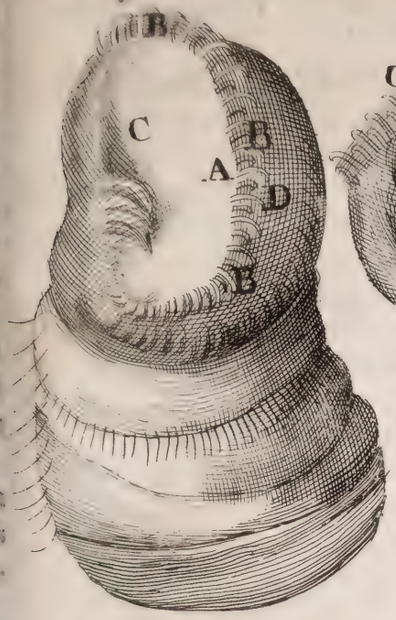
annuli latitudo arctior redditur.

argentei emergat.

sub quibus coposita ra

coniosæ ruæ & per longum ductæ, infigu & recurvæ erumpunt, pariquæ oblongæ & diaphanis ornantur, versus extremum corporis

Fig. 1.



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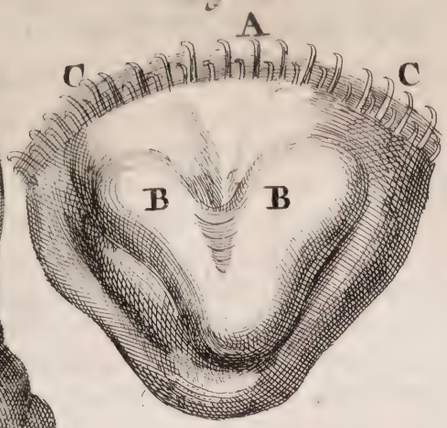


Fig. 3.

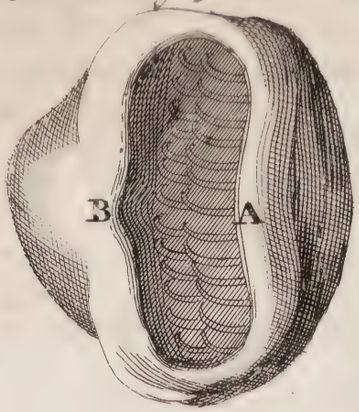


Fig. 5.

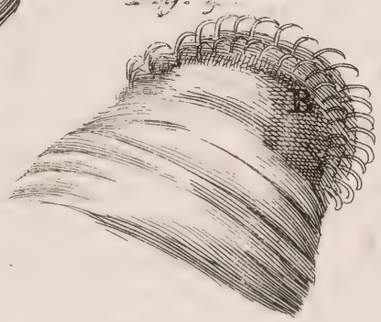


Fig. 4.

Fig. 6.

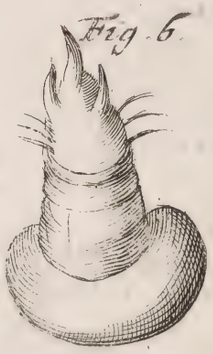
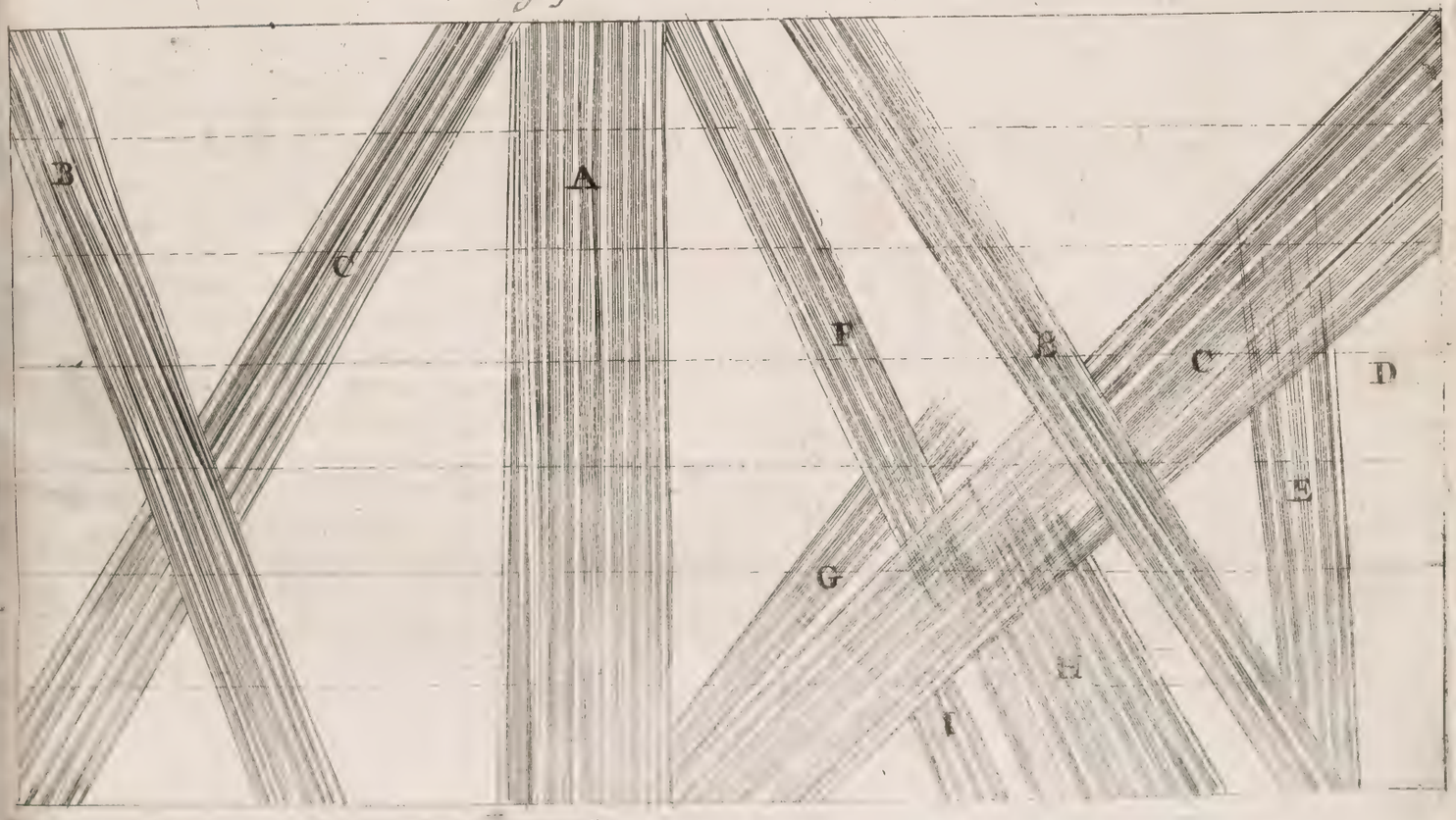


Fig. 7.



cauda *S* erigitur inſtar ſcyb, qui in implantatione latior, ſenſi[illegible] ileſcit, ultra ta[illegible]
men medietatem arctior redditus in Conum desinit

[illegible] ad ibium d[illegible]

[illegible] arumſorum poſitione verſ[illegible]

[illegible] ices, mireque coloratur

[illegible]

depreſſum, in ſuperiori præcipuè parte; binis ſeuſipic[illegible]
tur, unde angularis quædam portio *B* intercipitur, quæ Lambdoidalem aſſimulator
gutam, ab hac ru[illegible]
pro animalis libitum ſeptam r[illegible]

[illegible]

bitum animalis, ſurſum, & intro etiam parumper [illegible]untur. In anteriori parte, ad la-
tera tamen, globuli *H* quidam, numero ſex, [illegible]ham protuberant, qui *Oculi* conſen-

[illegible] ionalem magni

[illegible]ſdam ſeturas auxit

Fœtus corporis habitus pilis conſpergitur una cum ea

[illegible]

poris medium à ſexto [illegible], octavo & nono annulo, quatuor cruorum paria hin-
inde in humiliori parte [illegible] Eorum figura rotunda eſt, & latiori ſui parte à cruora. Eorum figu-

[illegible]

Ab extremo cruris, ibi in parte exteri[illegible]

[illegible] a lupertus ſtruca, nigra quæ- Appendi-
[illegible] t carneus crumpit, qui ſeſamoi- da ſtruda

ſphæ- ra

sphæræ parùm compressæ formam habet. A nitetur au
bi to ur

Bombyces

vellus gos

ir Ex quibus mott

is ventrem dirigantur, & ita constitu

curvo aptæ versus aspicientium oculos e

Deductis tandem ad

itur & gracilis, Vola v

rhetem turget; & imp

Differentiæ dragmta. Disparem magnitudinem sortiuntur & duplici sub

finem, sed paulo infrà terminantur recur

extremitates protractæ lineæ parallelas rel

b ano extremæ jam ppendicis, crurum munus explent, binosque pedes promunt, jam descriptis consimiles

implantantur in his annulis latiori principio, quod o nostrum

retracta etiam obsc ntur: tubus gaudere videntur peternodus, quibus

varieque flectun Horum extremitas unco, versus interiora, armatur cui ex

officinis al derivant, & per meatus, vel vascula per cutem dispergit quamvis
bycis & Aurelia v n hujusmodi concretus succus una cum visceribus
b dropsis accidit

quæ rugis & fi
unda quædam spatia qua diag

Membranæ, seu cutis, arcte ha lonum ded
quæ revulsis ad latera viscera parent: h v r, &
e in parte, ubi singuli a uli nectuntur ad invicem, a
tu, Ip n color carneus est, & fusalibidus, seu cinereus, ra vero otunda, Ipsarum &
, us tamen lustrata, unaquæque ipf cordam, vel f
n quasi cordarum plexum exh
parûmque convulso, l enta non recta nec sibi para lela, sed qua
ras efformantia conspiciantur, quod & in rendinibus quor
prægrandi animali non raro obser
nationem f per e dicretis contextos musculos, quor rem & fi- Fib
tum rec dine
n, &

Q
xtremum producitur. In singulis tamen

hocque successive contingit, ita bj Q

L

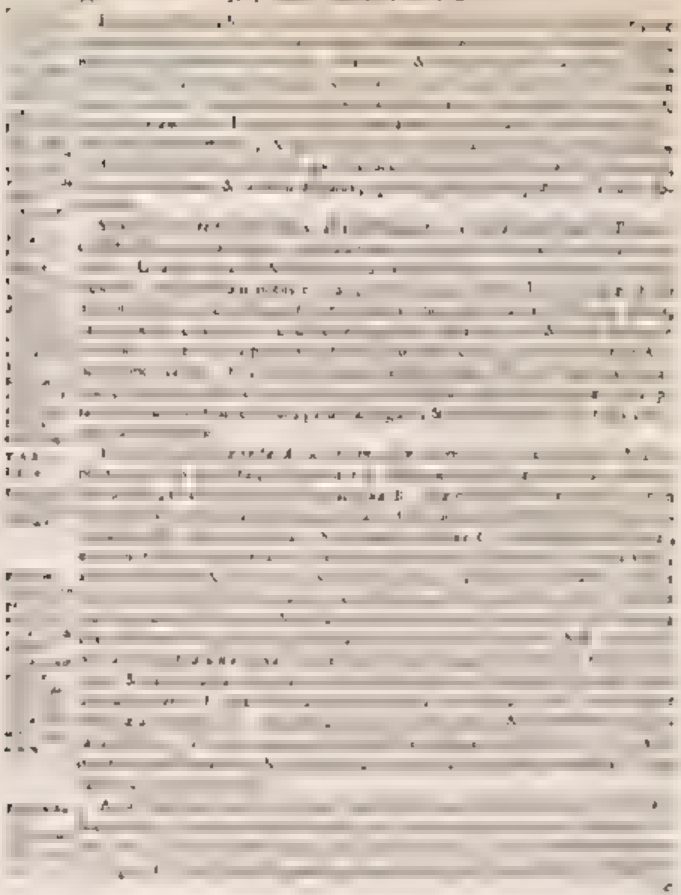


Fig. 1.

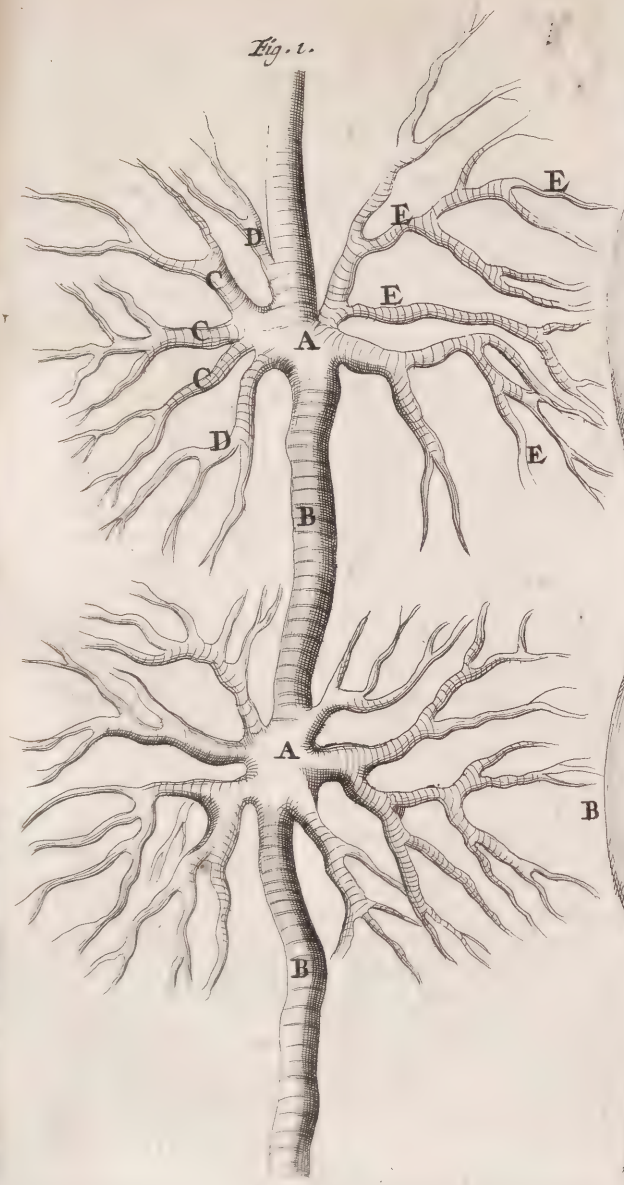


Fig. 4.

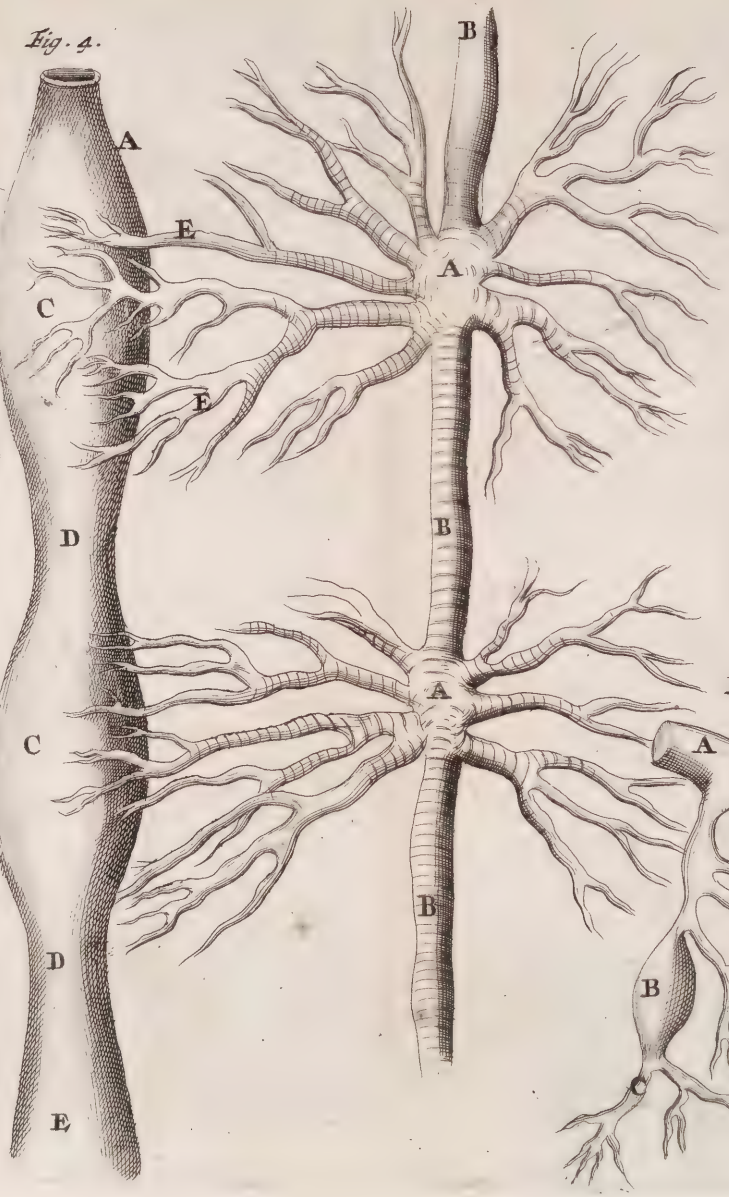


Fig. 2.

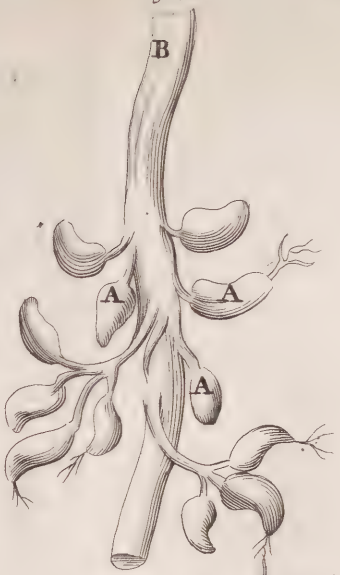
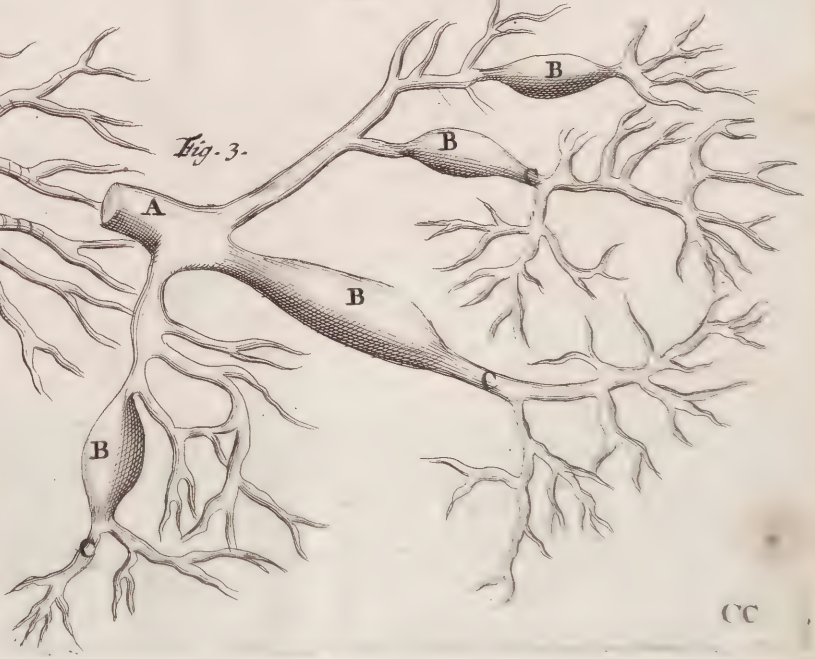


Fig. 3.



rumque extenduntur; proximi autem bini anguli crispantur & t

dem motus minoribus pedibus, vel bra us non longè à capite locatis, quadrupedum

præter secun n & tertium, excitari exte ius, jam habuimus, ortum trahunt mirabi
les quædam *vasorum* p agines, quæ singulas corporis partes irrigan
, sed in

currentes hujusmodi oppositi ra evidentem Anastomosin patiuntur. Propa
hæc vala, Arteriarum more; sen enim à suo elongata trunco gracilescunt, & fre-
mum reticulares plexus, ut in arbo-
observatur, efformant; quod præcipue inter musculos, & coriu
rtes exporrigantur, ut nulla pilus sensi-
o, qu horum propagines non admittat. Va
leo seu p mbeo p , quisensim argenteus efficitur, varius tamen in cor
palearis, vel auri
dorum fi ien, quod a losis usque fol

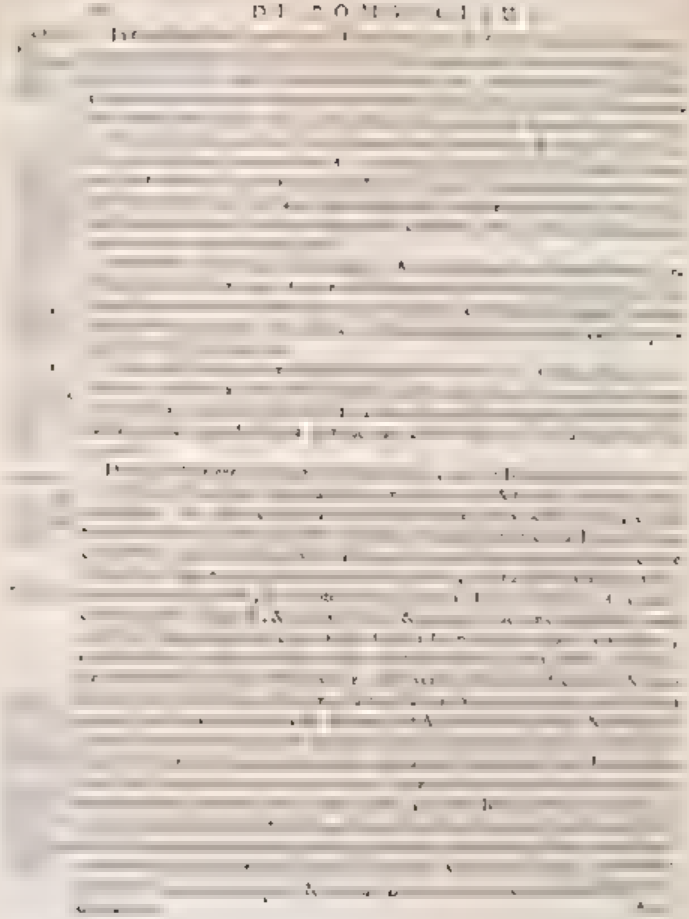


Fig. 3.

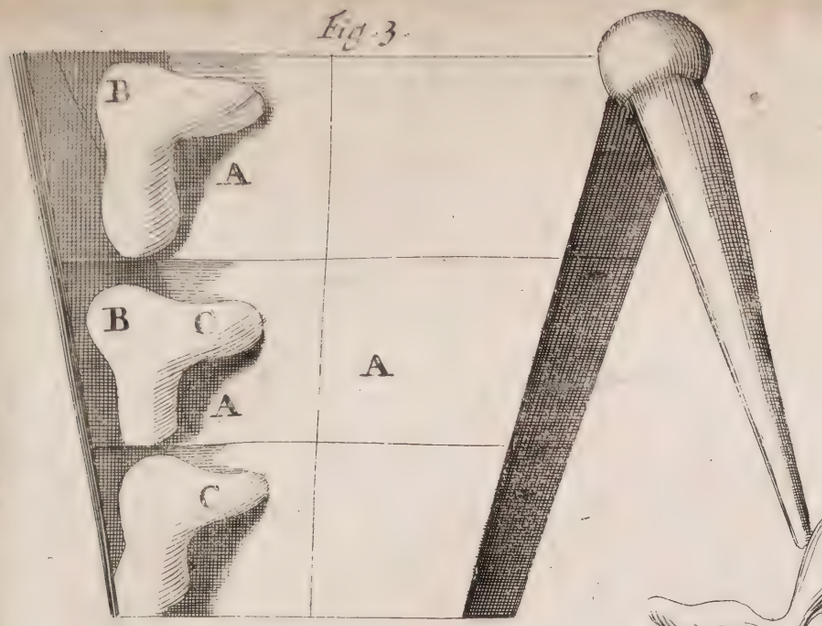


Fig. 2.

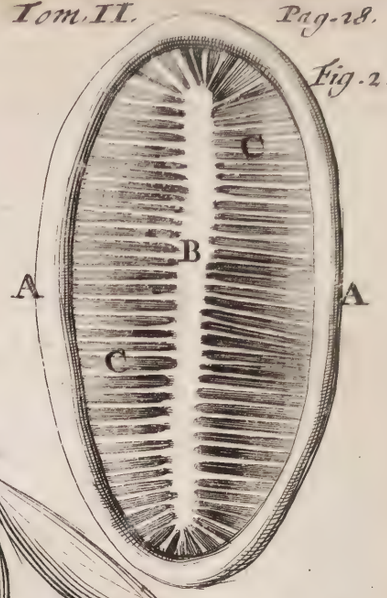
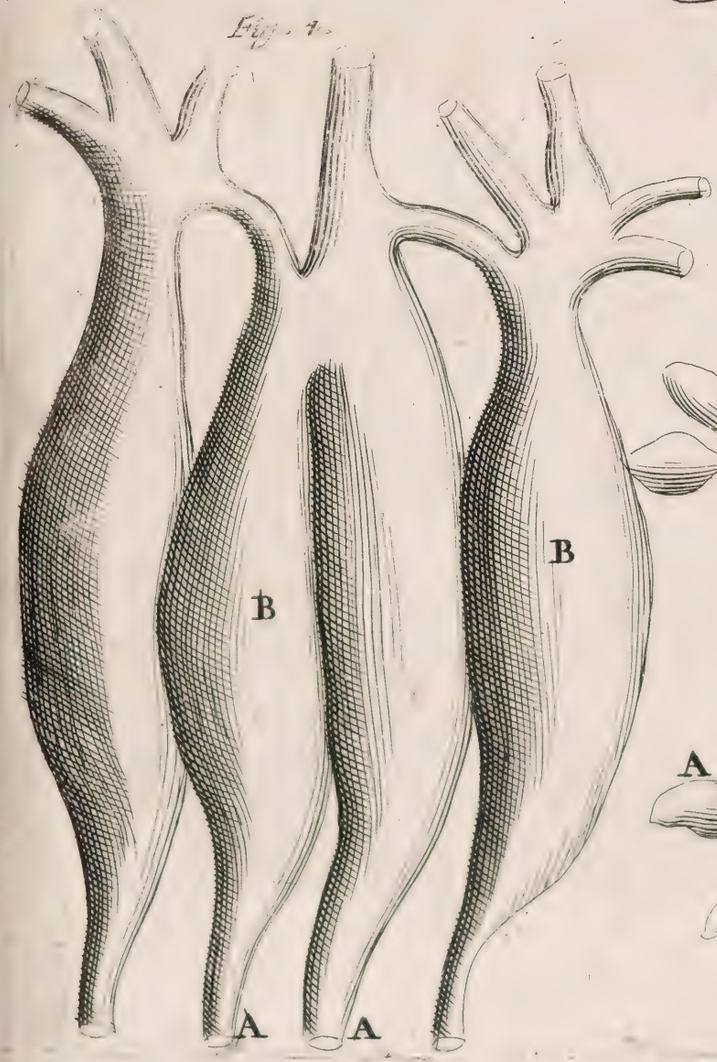


Fig. 1.



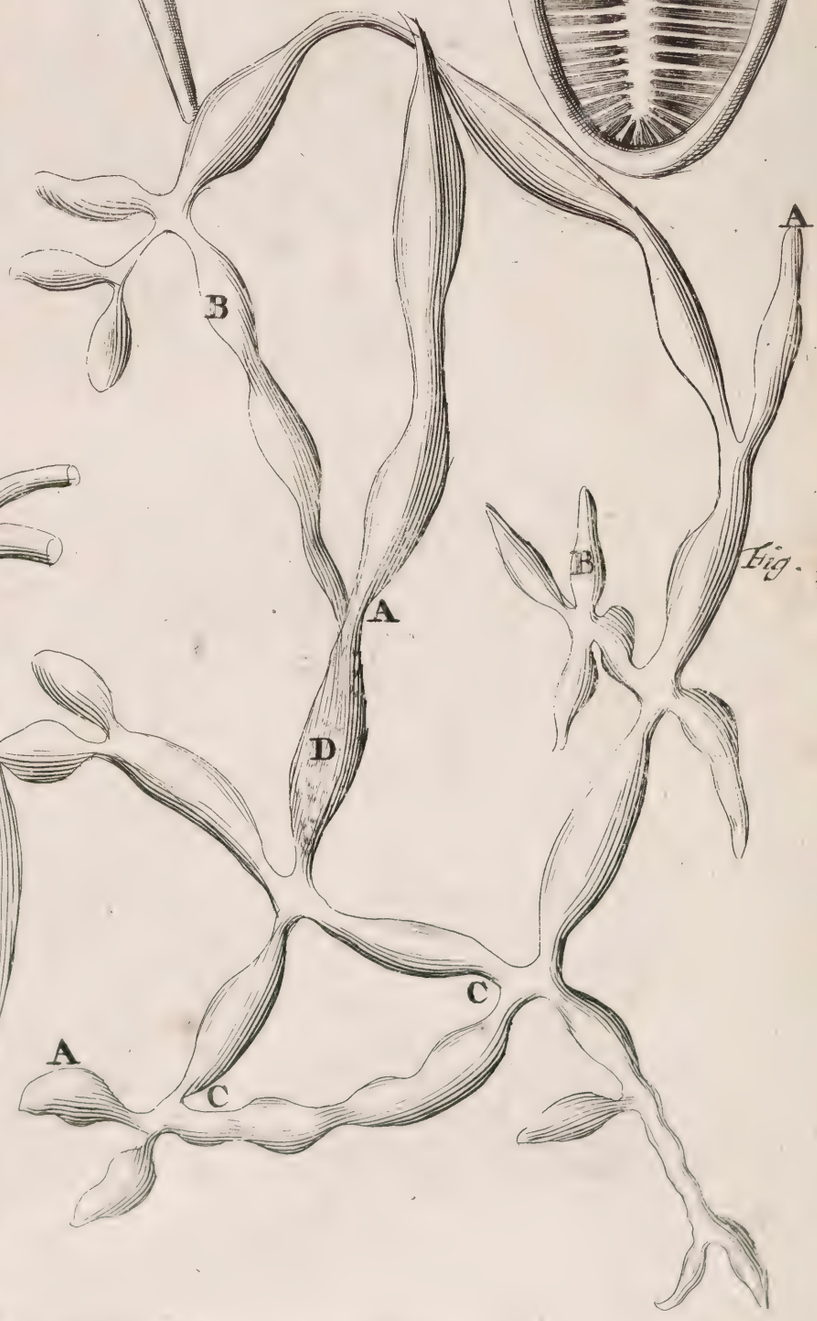


Fig. 4.

[illegible] sunere tentavi, aspersis leviter, etiam pernicioso oleo inuncto, tracheæ su[illegible]

[illegible], illud de natura Oleri, insectis infensa, exnlorarem, varia molitus sum. [illegible]
[illegible] ficiens tracheæ superioribus à corporis [illegible]
[illegible] si paralyticus jacuit Vermis, nec [illegible]
[illegible] s motum servaba[illegible]
[illegible] as, tandem folliculum [illegible]
Aliorum insuper inh[illegible]
[illegible] ix convulsio[illegible] es, quin & superiores par[illegible] o

[illegible] tæ portiones moe[illegible]a non parum mo-
[illegible]us; & in his, quibus successit mors, ventriculus inferior [illegible] mpenic co[illegible]
[illegible] n aliqui binis transactis horis cibu[illegible] tavére, & statotempore
[illegible] gére. Inter hos unus vel alter, [illegible]is pluribus diebus, interit: qui-
[illegible] uetos dies, quibus copiosius cæteri cibum sumunt, sta[illegible]
[illegible]
quasi corpore vix movebantur; tandem expergefactis supe[illegible]ribus paribus (nam u[illegible]
[illegible] fere [illegible] neutris accidit
[illegible] [illegible] p[illegible] [illegible] V[illegible], C[illegible], O[illegible]
Dorsum, [illegible]æsis tamen tracheæ orificiis, fa[illegible]
[illegible]
[illegible] o, ve quid si- byces inter
mine succe[illegible]s n[illegible] [illegible] gula orificia, & [illegible]hico penetre[illegible] [illegible] raccidit usu Lardi fe[illegible], & h[illegible] mo-
lum, nec adspersis tantum & oleosis nest hæc mor[illegible]
[illegible]e; cum hoc tamen discrimine, quod aliqu[illegible]
terum frictione, detersa, revixére, hi verò, quibus alte hæreb[illegible]

[illegible] & hu-usf id
[illegible] n Vos monitos volo, Bor[illegible]
[illegible] it, Ci[illegible]
[illegible] er horas steréreé[illegible] tantum cordis mot[illegible]
sed pr-stina [illegible] ctari licet, corpora, quæ det[illegible]
possunt á tracheæ orificiis, ut aqua & sim[illegible], non ultimam interne necem, sed illa ecs enecat
[illegible] ediantur, vel ai[illegible]
[illegible] e in ventra[illegible] [illegible] lis, rumpitis hujusmo[illegible]
[illegible]

An verò necessarius sit abdominis motus pro aeris accessu & [illegible]

dum, & cum nefas sit, Vobis dubia meaque inventa nudos proponere conceptus, illud tantùm sensibus comprobatum Vobis offero [illegible] oscopio

[illegible] tribus annulis [illegible] a dorsi latera non obscurus perpetuatur

[illegible] tantur vel pelantur, & succedentive ext[illegible]

[illegible] In *Lorosis* autem, ea [illegible] fatatio, ea in pari[illegible]

[illegible] in singulis etenim annulis *A*, ossea vel cartilaginea binæ la[illegible]

[illegible] eus extendi, indeque capaciorem reddi ejusdem cavitatem; [illegible] sam in proprium resilire statum, hujusmodi arcuum op[illegible]

sequar

[illegible] tibi invicem continuatos; [illegible] Sed & varios & multiplicatos etiam dicendis duntaxat potest, tot *Corcula* esse, tibi mutuam opem ferentia, [illegible]

[illegible] in ipsorum *Systole*, taliter moventur.

Extrema latera producti cordis, dum *Systole* fuit co[illegible]tur, ad medium cordis procedunt, & crassiora seu prominula reddita, [illegible]r, sed

[illegible] ubi Cor valide [illegible]movetur, concurrunt exactæ lineæ, & in arctiori [illegible] se supereminare vi[illegible] medio inter-

lentè deducuntur, tunc nulla ferè sensibilis consurgit clamo.

Coeduntur motus non eadem omn[illegible] temporis differentia succedant, sed in Bom[illegible]us sicut & in[illegible]s etiam, ab extremo corculo, ad caudam loca

[illegible]nus illico tenuis humor

[illegible] E & sic successivus fit tumor, [illegible] Bombyce

[illegible] nequeat. Patet autem, dum

Ab à corde *Arteriæ* ori[illegible] cum deferentes, tondum certo affequun-[illegible]s sunt, visas tamen interdum sum in *Aortis* conspicuos ramos in annulorum inter-[illegible] Arteriarum truncos esse conjecti.

[illegible] res ipsius pro[illegible], [illegible] respiciunt, ad[illegible] & quoniam Cor cum contento liquore diaphanum est, ideo ipsarum emergit spe

Aliud etiam corpus, Cord[illegible], A[illegible]is productionibus hinc inde la

[illegible] vicenibus relicta pe[illegible] repleatur. Tenellum est hoc co[illegible], [illegible]rè implicatur, ut, quacunque licèt diligentiâ pe[illegible] ipsius contexturam attingere necat

[illegible] grandioribus itaque *Eruca* albæ hæ pro[illegible] & [illegible] oblonga est, parúmque depressa, nec eandem vare, sed impensè interdum angustiora redduntur ox extenduntur quàm in folio- Eadem est rum formam *B*, & [illegible] & implicata laxum rete *C* effirm

Hanc eandem [illegible]ram in Bomby[illegible] Duabus [illegible] [illegible]tiora hinc

[illegible]

nod deinde in B ibycum fruticis, affuſo atramento,
Glanduloſam parenchyma, & inde vi-
lcerotam
loſophan ſa ſubſtantia in olem
landetur, flammamque concipit, ibuli, reticularibus pro
& nibus, veſam memoranem facet

ductiones mm tracheæ ram it, & ipſarum tractum etiam
Ventris replet ventri

en & rotundæ, aliæ autem per tranſverſum

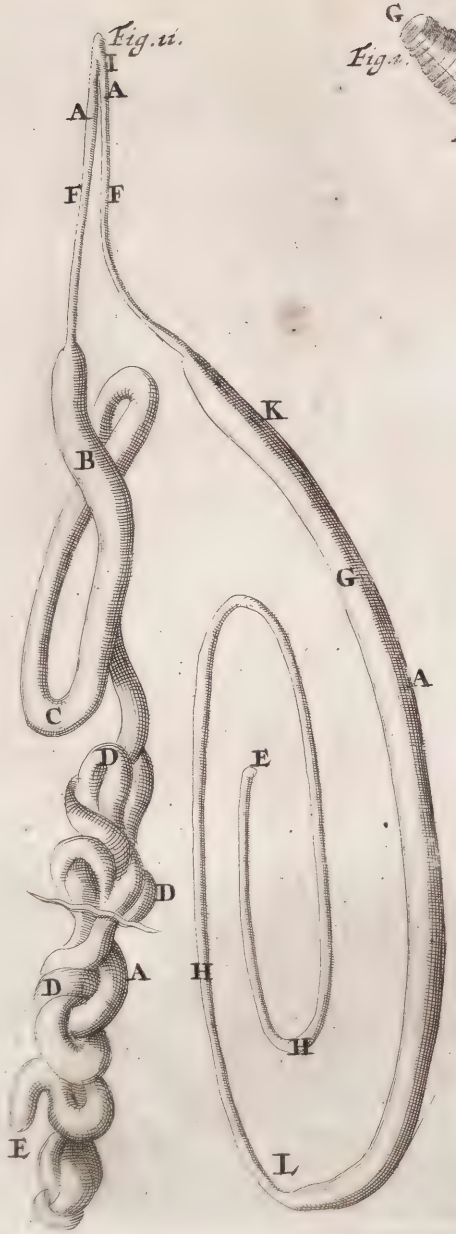
ſtione & amplexu interceptæ mam
prominebant, velum tot globu
ità determinatæ exaratæ prominentiæ,
e exterior ſuperficies, nullo vigente
ræ F quaſi chordæ, per lo

hoc extimo camoſóque ſaccolo, q ulus totus continetur, &
& diaphana occurrit mem n oblongi ſacculi parter
rmata, quæ nullam ferè videtur cum c non camoſóque anſiculo con-
nexionem habere, quia ſecto primo
In hac

& dum proxime ad folliculi fabric apponitur carneus efficitur
In ſuperiori corporis parte non oſtringitur Ventr
ductus & efficiatur, qui in otis cavi
excipit. Verſus inferiora, ad ſit
formam *H*, mox orbicula
poſt brevem coarctationem *K*

reus, hinc inde p ongum ſex prominentias, ex laxata propria tub-
ſa quibus ſpiræ ſex

Fig. II.


I
A
A
F
F
K
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C
D
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Fig. I.

G
E
A
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M
L

conſimilibus Inſectis c[illegible]res & diſſectiores ſ[illegible]

[illegible] ſunque

[illegible]untur. Tenuis ventriculi appara[illegible]

[illegible]em ab *Ariſtotele* le

[illegible]angu[illegible]neis ipſis

[illegible] parte

H, tenuia [illegible]ta eme[illegible]t valu *N*, quæ utr[illegible]

cei coloris ſunt [illegible] ſum exporrecta, [illegible]nuntur, q[illegible]

ſex reflexiones numerent[illegible] quibus ſubjecta ventriculi [illegible]. Horum[illegible]

ortum diu quæſivi, & tandem vi[illegible]ci parte *H*,

[illegible] ſubit, à qua conſpicuus q[illegible]um trunceus *O*, brevis licet, cu[illegible]

[illegible]ior dividitur in geminos ramos ſinuſum[illegible]

[illegible] reliſtique varicoſis equidem productionibus, in interiora [illegible]

[illegible] vaſculis flavis, interdum albis, ichor, & per ſectum ventri[illegible]lum pa-

Horum ſtructu[illegible]

pta mi[illegible] [illegible]icui indicaret con-
nutarem. Præterea hæc minima vaſa intestino præcipue recto *M*, & mu[illegible]

ta ſi, quod fur[illegible]

[illegible]torum commodam levitatem
me primi ventriculi, & for[illegible]
coarctato ventriculo f[illegible]
dunt. Ob excede[illegible]

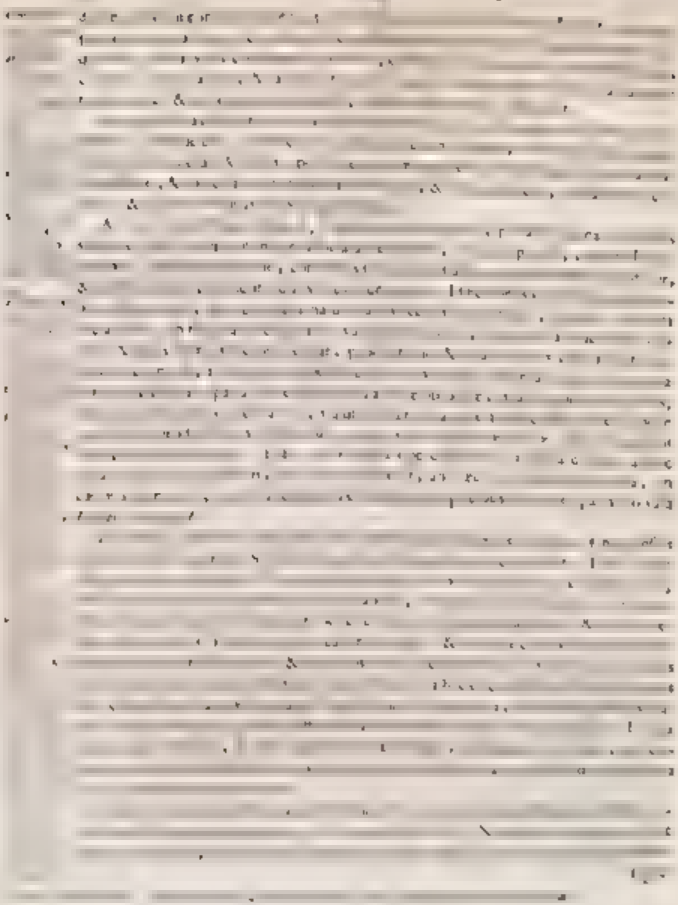
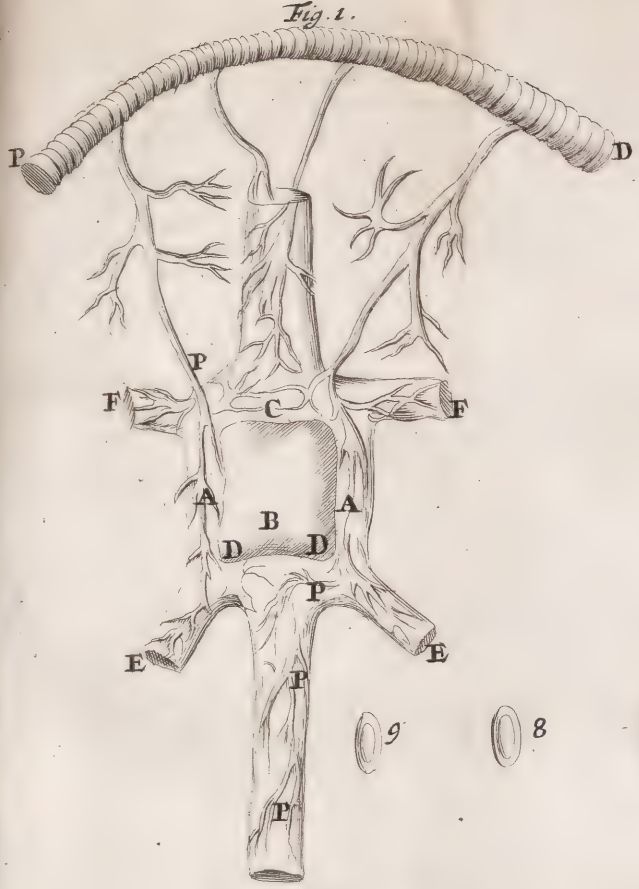


Fig. 1.



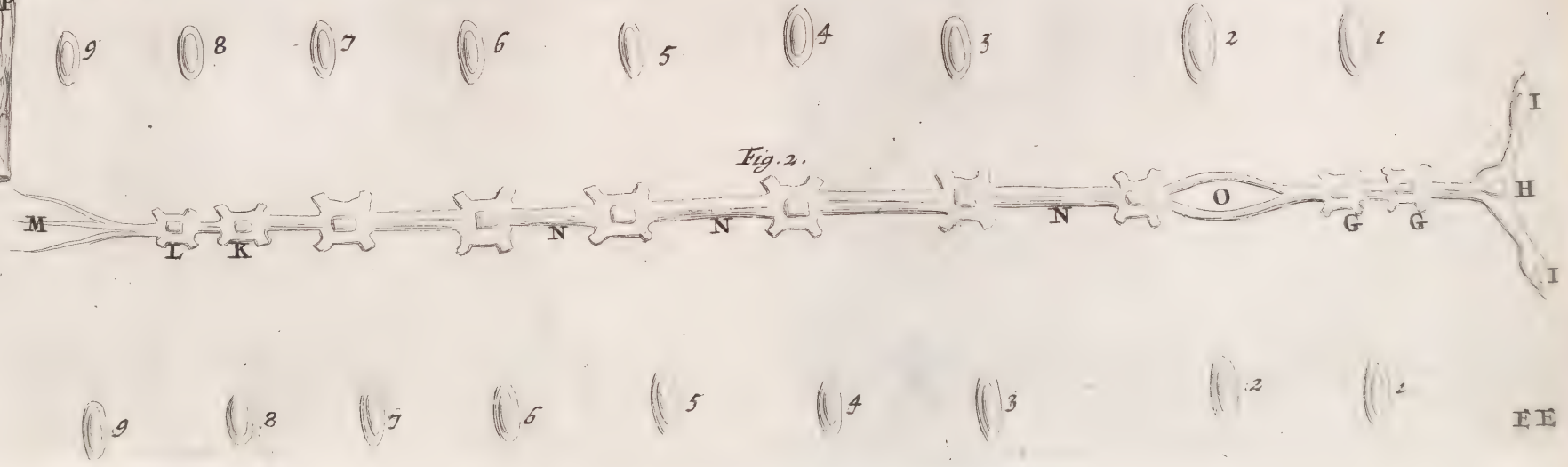


Fig. 2.

F gracile est, ipsorumque torum angusta sunt, subsequens verò portio G laxior est, quæ tandem rotundi intestinuli I formam jam adepta, post plures circumvolutiones extremum sortitur finem E. Longitudo omnis d tus Bo em æquat pe dem. Inæqualis horum ductuum conformatio non ca gulis Insectis, q n prægrandi Eruca intestinorum gracile, sibique om o simile, deprehendituri. Inæqualis est illorum du- paleans ubique coloris.

rint. Duplex tamen vulgariter solet efflorescere c subalbus, cum modica quasi sa phuris tinctura T corum situ, staminis subo

r *Seriam* app succus, qui ab I in K, is portionem occupat, subs nuli usque ad L, aureo rum occupatur humore corpore primum fersci duc onem. Succus iste, aquâ communi eluxatus, non solvitur, sicut nec igne liquefci quam concipit, sed go stat glutinosam retin

Tracheæ ramul que grac defcent bus, totus horum intestinuorum irrigatur tractus, cum pr i quique tracheæ trunci furculos trans- In certis aliis bombycibus contingere

In prona corporis parte postavulsa viscera, in mei tris, à capite ad Succus iste non solvitur

idemidem quam nodosa compag n habent, quæ erumpentibus nerv arùm convexa est, & place

in suprema sua parte G curva promit appendices D, breves tamen, ex

altera parte A, quæ vel ipsam aml r: nam *hæc* subalbida & candida est, *illa* verò Leonum col patet structura, non tantùm diversus erumpit color, Diversus co-

interdum dubitandum nobis occurrit, cu capite deprehendere nequve n, globulos s ndulos hosce cerebri esse dispersas Cerebri por- andulas, à quibus nervorum fibræ e m occuper cortex, à quo

quo-

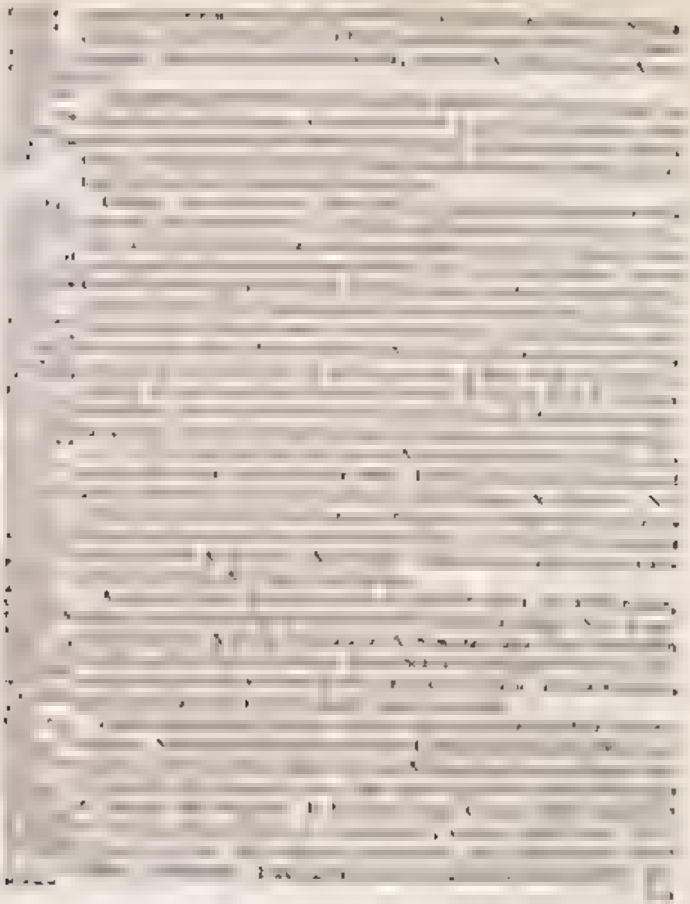


Fig. 1.

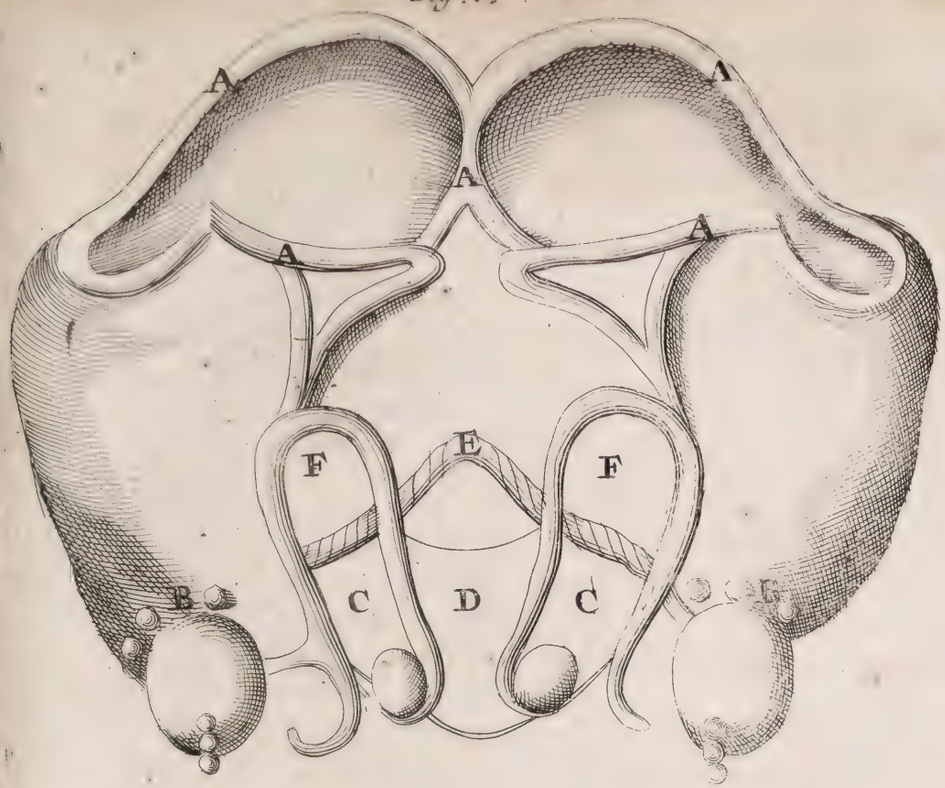


Fig. 2.

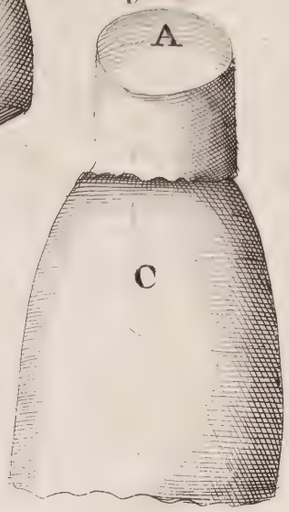


Fig. 3.

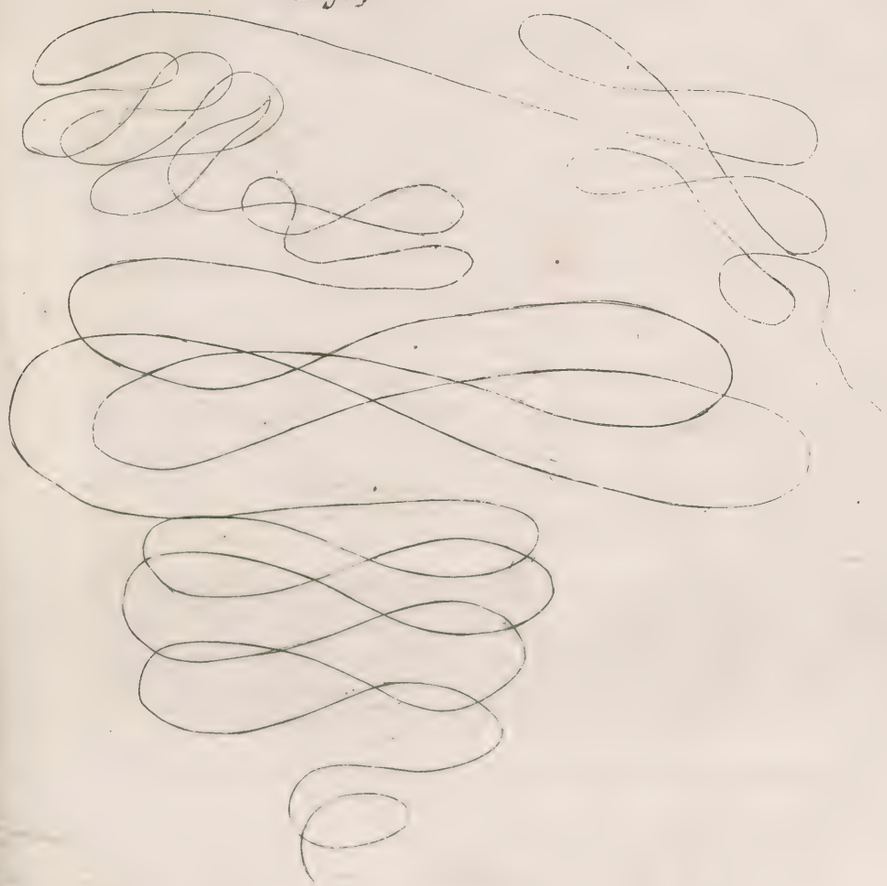
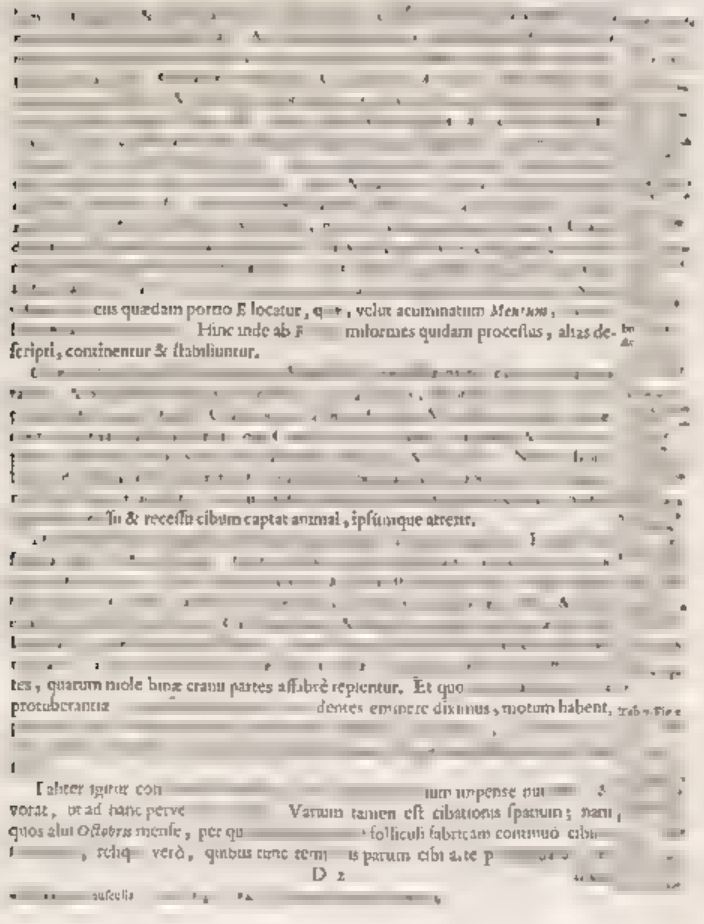


Fig. 4.

Fig. 5.



cus quædam portio E locatur, q[illegible], velut acuminatum *Mentum*; [illegible] Hinc inde ab F[illegible] miformes quidam proceſſus, alias de- bc
ſcripti, continentur & ſtabiliuntur. ac

[illegible]lu & receſſu cibum captat animal, ipſúmque attrent.

tes, quarum mole binæ cranii partes aſſabrè repientur. Et quo [illegible] protuberantia [illegible] dentes eminere diximus, motum habent, trab-ſic-e

Dalter igitur con[illegible]ium impense pur[illegible]
vorat, ut ad tanc perve[illegible] Varium tamen eſt cibationis ſpatium; nam,
quos alui *Octobris* menſe, per qu[illegible] ſolliculi fabricam continuò cibu[illegible]
[illegible], reliq[illegible] verò, quibus tunc tem[illegible]is parum cibi ante p[illegible]

[illegible]aſcella[illegible]

bant.

tibus accidit; quod & in *Styrace* expertum v

Aufer bom- poſtremo fo

mè concreſcat. Nec minus E

Phænomena alia hu ris. nat color. Anteriot corporis portio, ſecundo & tertio exc tata annulo, turgida redditur, & purpureo colore perfuge Eundem etiam colorem referunt maculæ quædam in quinto & octavo annulo ſcentiæ. portio pariter intermedia annulo-

mo quodam refertur ichore, qualem ex ſecto corio erump

quod cùm glutino- & ita lanam quod-

debita

delato illuc glutinoso succo à fericis dactilibus exprimitur.

xtura quadam a Bo

pilum dicat

pollent colore, juxta teil.

continent duc nus, qu ar operis duc exterior folliculi, molis tamen, tex- U pluri-

pue tramitis additur te

flamine foli lior redditur fol colus

Singulus Bombyx explanatum folliculum sibi pa

unius tantum folliculi fabricam fatiguns, unde ex filamentorum un

possibile est, se n tetexere. Hujus crassities dupla

est, & duplicem circ as nul on adest seorsum sed una

parum diversa à mox descripta folliculi form

eam tere femo remus quasi juxta se p

loco fol cat obtec

nte hveme Bombyx, in se ipsum

ûs tur-

ani appendices, purpureæ resultant.

cheæ orificia angustiora redduntur. Interiûs trachea vasa ...mbeum colorem se-

crumpente, ità ut libera appareat *Aurelia* seu Nympha.

Incrementum Aurelia.

...hunc est, quòd invicem de facili hæreant, ... lendum accedentes ità arctè uniantur,

Se vulgò credi-

...as, ac vulgò creditur, emergere, alasque radicari, cum ...

ante fol...

Fig. 1.

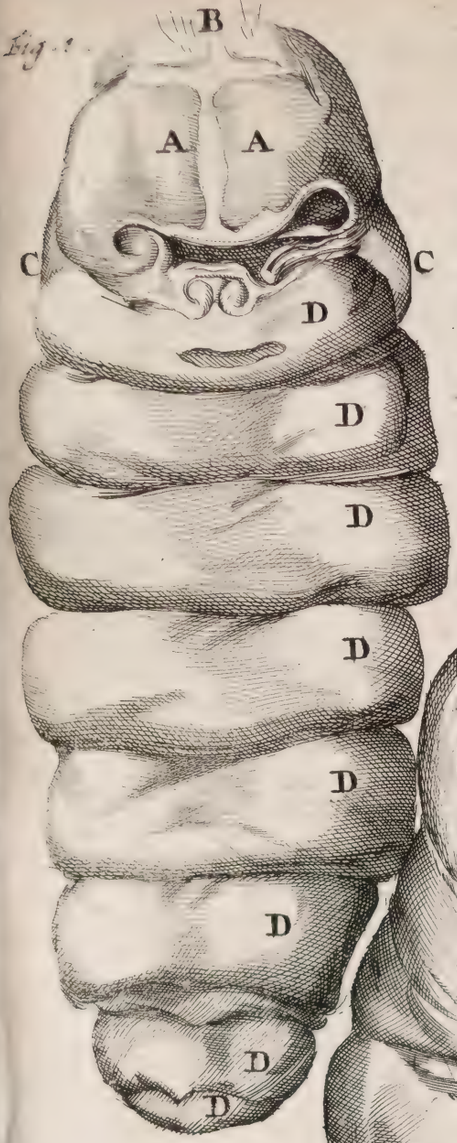


Fig. 3.

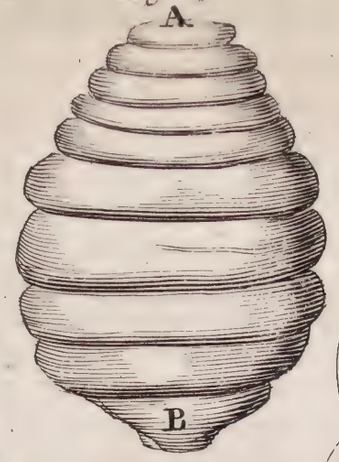
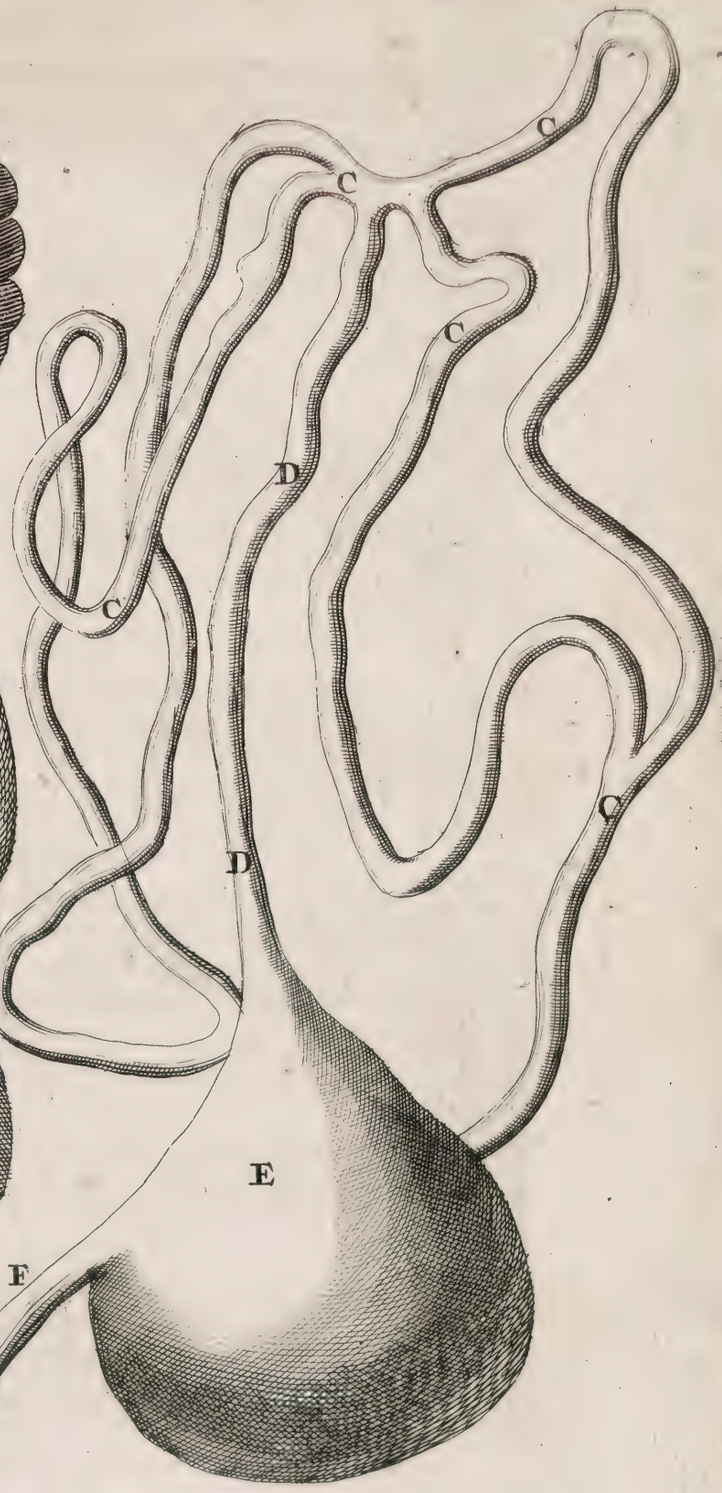


Fig. 2.



D D

nus non nisi jam geniti Papil

Corporis exima figura ferè Ovalis est, [illegible] seu anni [illegible] bus, constans: Ventris medium parùm protube[illegible] sensi[illegible]ùm alvo in acutum desinat; ut Icones demonst[illegible] In quodam [illegible] dicam) situs adest recondit[illegible] capitis B bus descripti corporis exortum tra[illegible] nuentiæ binæ C, quæ deorsum productæ, & circa illum [illegible]rem extensæ, & revolutæ, postremum ibi sortiuntur locum. Hæ frequentibus per obliquum ductis fibrulis, alarum compa[illegible] dorsi octo compaginatur annulis, quæ rete nexa quadam pellucidi substantia continuantur; ipsorum color aureus [illegible]

Dissecto corio, seu potiùs peculi[illegible]bus concavitatibus, quæ singularum partium inchoamenta continent, iis pr[illegible]ipsae in locis, ubi tumores mox descriptos adesse [illegible] dent, constant, ipsarumque cavitates humore quodam reple[illegible]

concreto quodam succo, melli non[illegible]ar, abundat, qui nullo ad huc [illegible] circa ipsum tenuia intestina [illegible] seu vasculata eorum crocea producuntur, quâ servatâ figurâ, & Vitellina reddunt[illegible]. Cordis motus ut[illegible]

, non ità unitantur, ut rectam designent lineam, sed intermedijs plicabilibus & [illegible] voluris intrò incisuris connectuntur, ità ut interior a[illegible] pior, flectum etiam intrò revoluta reputur annuli extremitas.

quin & tractu temporis interior & reflexa quælibet annulorum portio, zonæ instar, eundem referat colorem, reliquum verò corpo[illegible] & latera, vitellinum diu retinent colorem.

quæ latentes oculos indicant.

pius patent tagrestius. [illegible] aculares plexus subpalcares sunt, ipsorumque membranæ non parum laceran[illegible] amula propria communitate, reliquum pin-

et, versus ventris medium ascendit, nullumque subsequentium [illegible] vitatum remanet vestigium, cum forte in ductum, & vesicam, [illegible] exponendam, abstinatur. Ventriculi figura vana incerta [illegible] natura, & fibrarum carnearum retractione, nam ipsius membranæ extra fibra-

...ventriculum ...nis rugisque referti
...cidit, illa est, qua ...potat, in qua A
...s ventriculi color varius conficit, nam in

...gma plus justo protrahatur Pap...
...qui pro nō mela...

...in er, qui in expo...

...asa C, seu ...stacula, hæc conten...

...e vel subcrocea pertineverent
...ur, & ...
...n ductum D, ab ...mo ...
...em occupan...
...tur ductus exporrectus, & latus, persi... ...tu intigu pe...
...rem quam sanguinis faniem, quem à contiguis vasi...
...tarum partium constrictione ...t, ut mirum red...
...mque exaratus, non successivis plumbis consti...
...n in vesicam expran... ...un sursum ab...
...dam, ità ut peremus fiat ...
...n in vesica E recolli...

...s, quam papi...
...n, aliud etenim famosum est, &
fundum occupat & excretum
leo potiet colore, & semper supernatat, etiamsi summa agitatione ce...
succo consocio. Hæc excrementosa materia, per alvum excreta, ...
...t perpetua subsit macula. Ab hac vesica alter erum...

...ut non par...
...quibus Aurelia forma emergit, Ovorum inchoamen- ...choamenta
...incipiunt; horum substantia, inter primordia, mucosa ...ipsorum ...ubsta...
...e lucet, cinereum ferens colorem, mox sulphureum: Ipso- ...

...vanus. ...comera...

Pereleantur, & augentur ova, ità u...

Fig. 2.

Fig. 1.

Fig. 5.

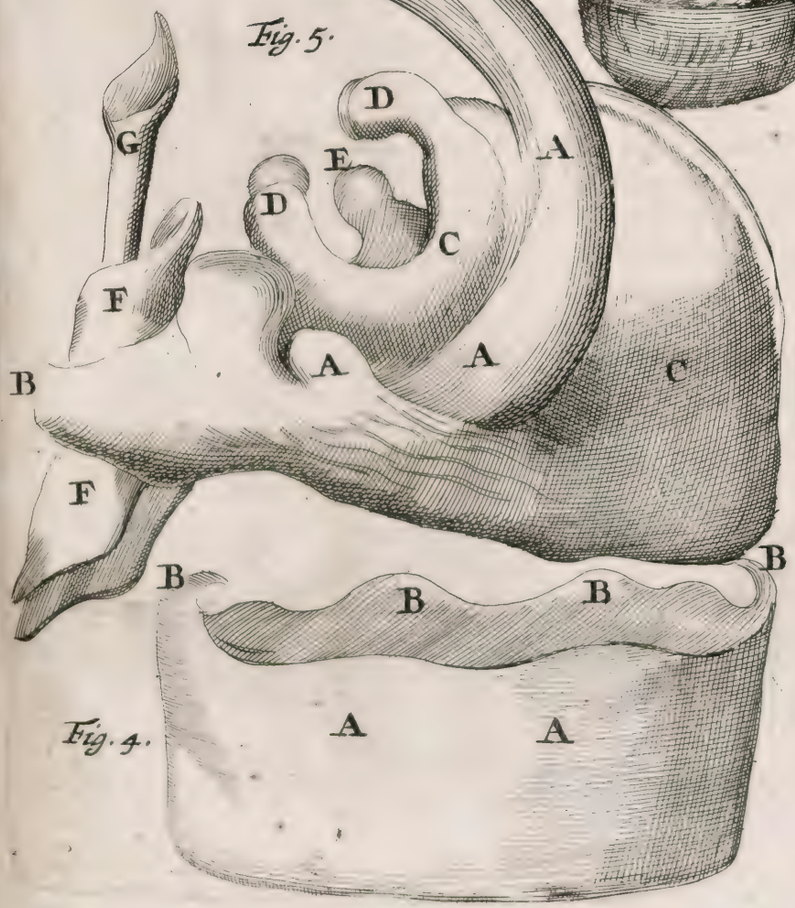


Fig. 4.

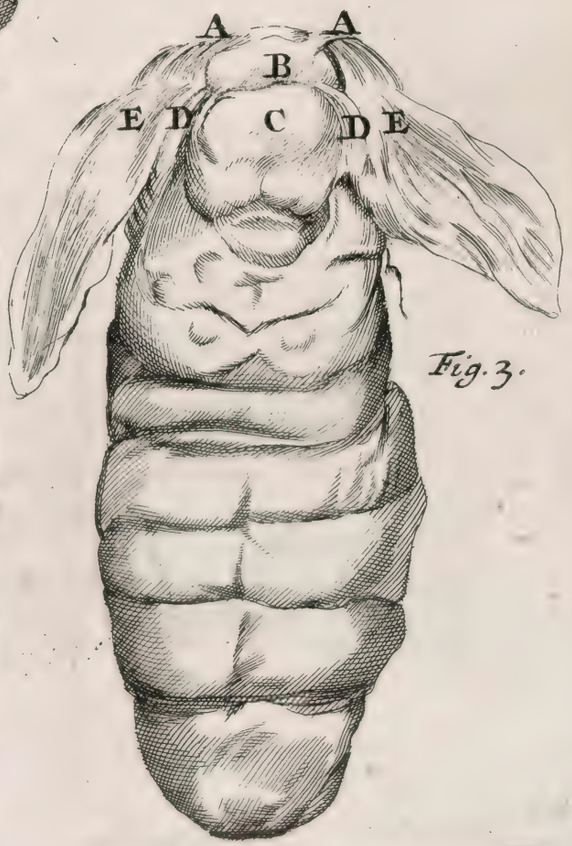


Fig. 3.

latur, etenim per l… quam plurimæ partes … Cervix anterius …
…sum decrescentes l… m deorsum curvantur, & trunci in… n …
…ftar hinc inde curvos germinant et… nos E, à quorum lateribus fusci exig… ci …
…que pili pendent: supe… ict partem, pilorum & plumarum, quales in … pendens Anteriu…
reliquo abundant cor… Hanc consimilem articulationem t…
reliquorum Insectorum antennis passim ob… la ipsarum parte;
flexionis motus ex…

F, quæ dum …

…nt autem intus retracta corrugari, quo casu, dum nut…
longitudine, ipsorum l… itur: ipsorum … vel com-
…pressi ventris tortura foras ext… & aquam etiam fundunt, seu mavis, excernunt a…
…ore humori locum præbent. … tenuarum, oculos, & labia t…
…spatium, quo os completur, resultat …
…rans. Motum habet caput ad latera, sursum, & deorsum, c…
…subsequenti thorace articulationem …

…m.) Exarata crura G, sicut & subsequentia, quatuor habe…
…bremo pedes H appendi…
…tur; quibus tandem bini adduntur ungues versus in… Ungues ejus …
…teriora recurvi. Prima igitur crura G, capiti proxima, inplant…

…dantationem …
…ubi articulatio subsequens deorsum reliquum cruris & p…
…partium cruris situ bini designentur trianguli. Hoc tamen peculiare in his pr…

…arum is, quibus com…
Subs…
E, pars o…
…, reliquo autem c… tem progressum habent, quem …
…gula hæc crura brevibus plumis & pilis commode …
…dis. Crura nec… hunc pendu…
…nal objecta apprehendit; unde necessario non tantum in ca-
E 2 vis

Superior Thoracis pars, humeros a

x papi ipsâ assurgentes, parùmque

versus pronam pectoris partem occupant, & minori pol ent la-

z papilio- bus M, quæ cæteris firmi

arborum vel n

porrectæ oblite tas hasce

rta tensu quadam & quasi diaphana reple substantia, quæ speculatorem

lem animatur; unde ex his omnibus a gue expan io, ipsarumque le

I ota a. a soles undique pennulis, seu plumis, tegi

n observantur, in quibu

tem manuum contrectatione decidant, unde

Reliquum papil ne p que ad alvum, octo com-

paginatur annulis seu dhuc substantia succum colorem refe-

Horum portio (ut supèrùs tactum est)

ta pars, sursum reflexa in anal ntur, in feminis autem Ovis turgens,

reliquo foràs emmet.

emo hoc annulo

y membrana quædam gilva pendet, quæ sensim acui ta ostiam nudendi & am ma-

chinam ambit & continet, sicque ve s cavitas cla tur; hæc inflabilis est, & ad

è fœcibus datur aditus, quâ anus co ur, & penis extro-

. Ut autem hujus a pateant, papilionis venter

mpente sexu libere p at, &

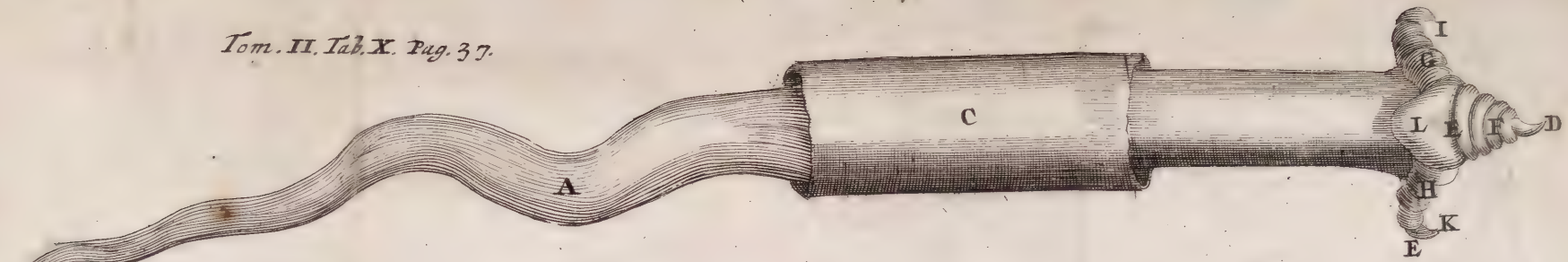


Fig. 1.

Fig. 2.

...do perpendiculariter pendeat

...sursum producta, femina graciliora reducta incurvantur, utraque penis

...cui ipsorum partem flecti, & curvari quali arcuatam

...ibitum extenditur, torsaque propellitur. In primo

...B se contingant primæ ipsorum

...onis instar, connectitur, vel quasi pharetræ. Hæc pro

...hæc penis inter extremas

...eo exprimendo penis ap

fuit ...rapophy

...trem condita. Penis

...tur bus

...

...

...

...tibus autem caruncula F G H

foveis asperæ redduntur; harum p...

lum, apice sorque acutior ...

effecta, triangula par...

...

unaris linibus I K, velut rostris, versus penis

...similar, apertis & revolutis t...

...carus conspicuus L hiat, per quem

...s penis frequenter exeritur, & extra cinitet m...

f... coeunt, etenim Glans penis, versus extremum co...

lem quasi designant lineam; nam vibrata pen...

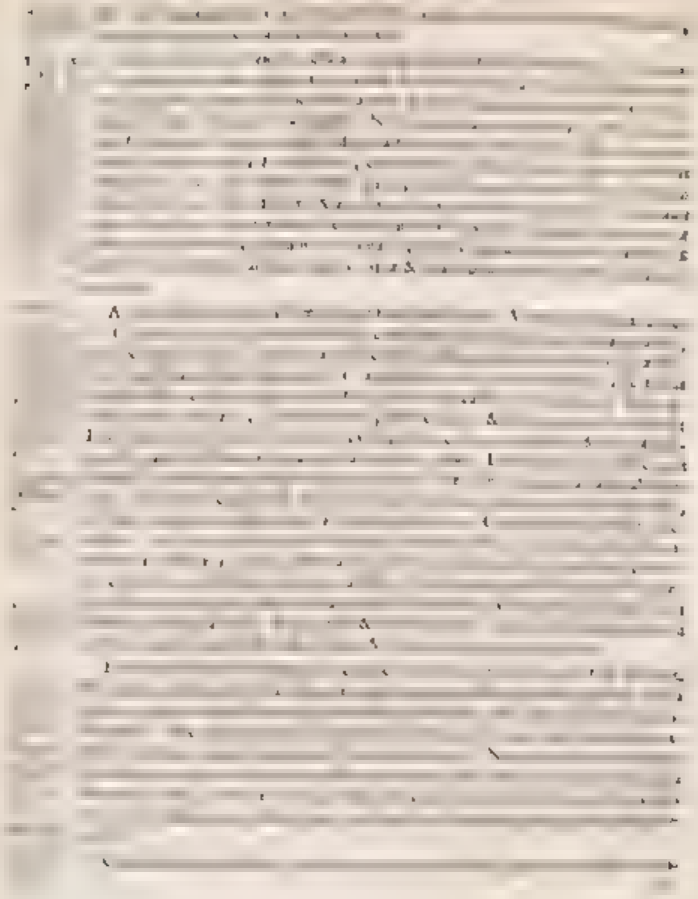


Fig. 1.

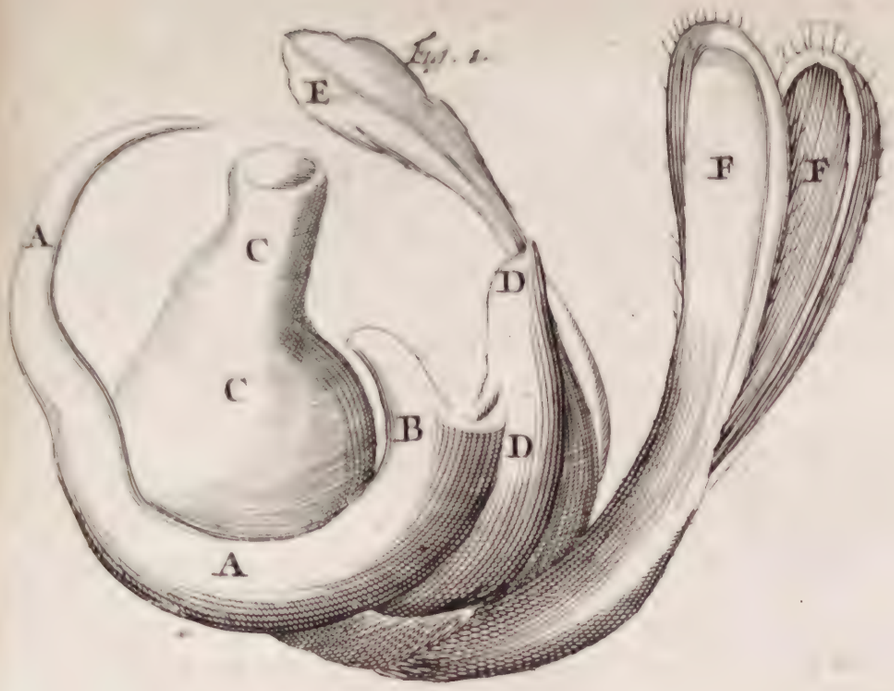


Fig. 2

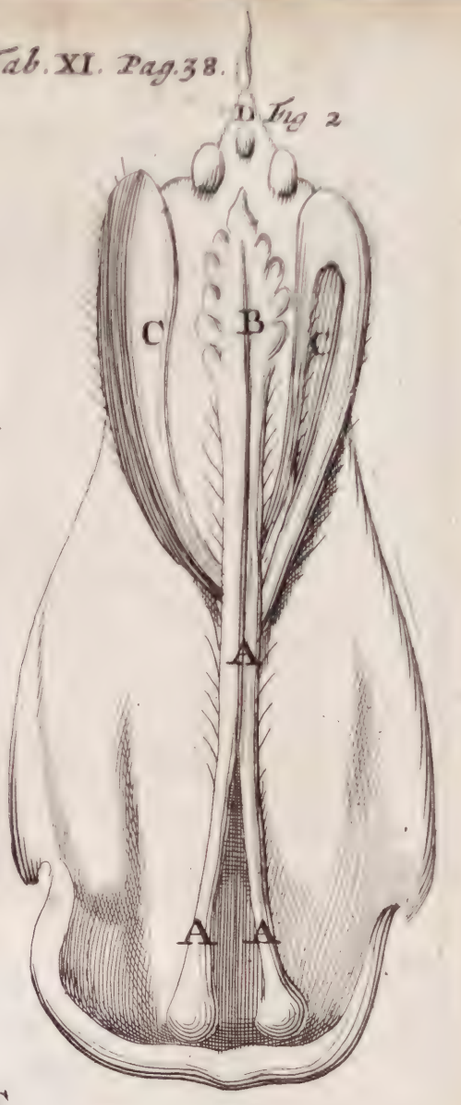


Fig. 3.

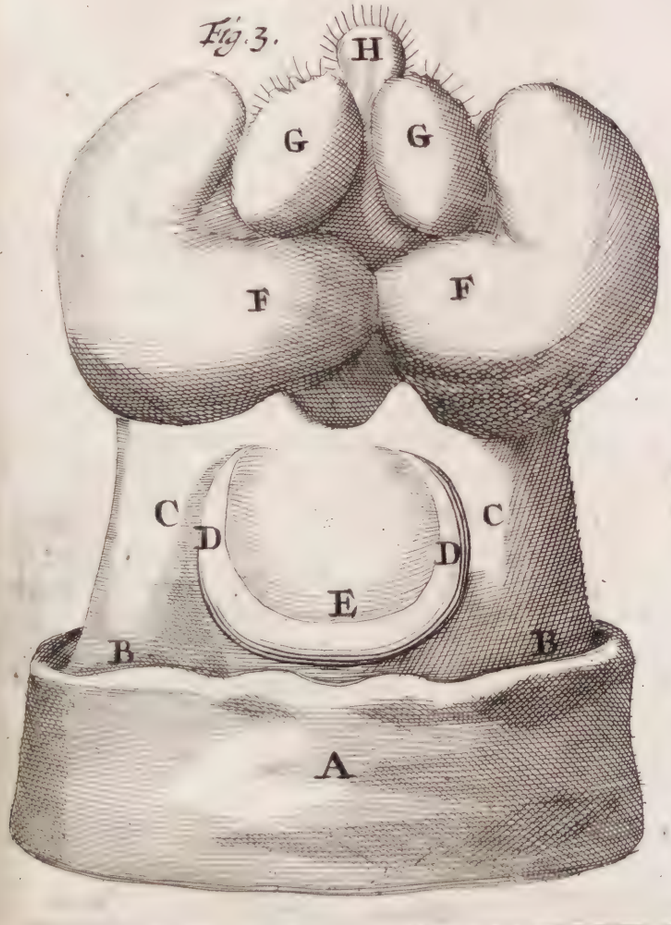


Fig. 5.

Fig. 4.

t an altera fubit membrana cum interdum unus veſtigia derelicta

tum vel tranſverſarium veſtigia ac preter ea poſt

in ſcipſus ita collapſi, ut circulorum loco animus quam ſquar
ur, Venerabilis, & inter ea olim crocea adhuc
A ciphus. Medium dorſi, cum teſtes M, amphores reddit, occupant

tarem alter-
aculatoria vaſa Vaſa ejaculato-
toria Papin

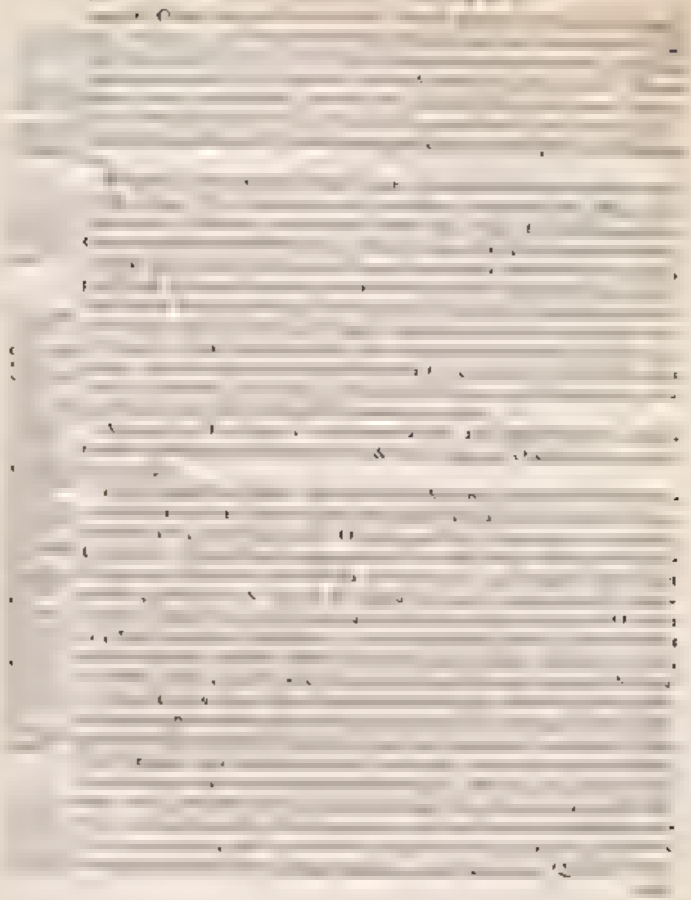
Teſtes adulto ran t, in Aureliæ ſtatu permanent, & au
redduntur, & poſtremò impenſè contento ſeu
moſe cætera viſcera, jam ſenſim ca ta, ſuperent: Horum col
ris eſt dilutas tamen ſal
que viſceribus rej
noles: inve

it. Cognatiem Itea ſuram in *Cicada*, & aliis ova

dor tantum ovatubæ ſeu ovarii ramum occuparent; quod in *Cicada* Ova

tra, ova D in ſingulo exarato ramulo C continentur Tubarum interior cavi-
tas ovorum generationem & commeatum promovet; in oſto enim

ur, & ita ovorum ſe



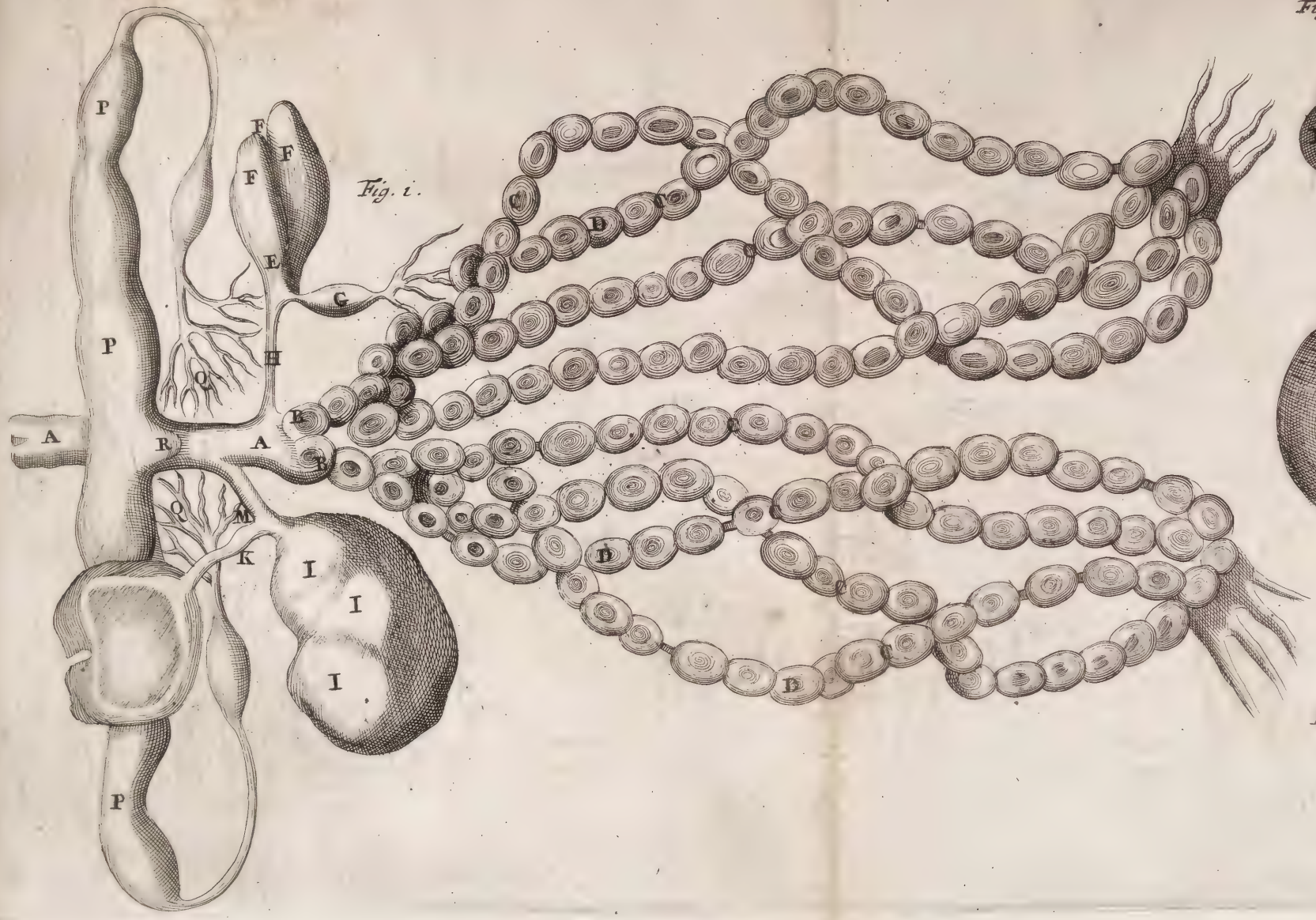


Fig. 1.

Fig. 2.

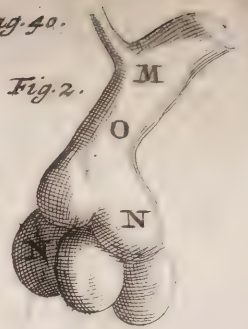


Fig. 3.

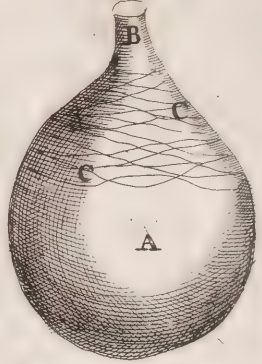
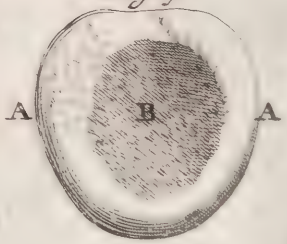


Fig. 4.



[illegible] succo, in quo occlude-

[illegible] juxta præconcepta successi let. Co[illegible]ia interim vestræ sagacitati commito, dum reliqua ovario adnexa viscera perlustro.

[illegible]am vasis coarctatur, & tandem extremis finibus in cæcos ab-

[illegible] tamen [illegible] [illegible] [illegible]

extinguatur rantate, & affusa aqua vel la

Ut tandem pulsuum varietatem expedia

mirum reddebatur spectaculum

buli absque considerabili progressu.

tentes corporis molem urgent.

tur.

bimus

or, jam à vestra fagacitate examinati fuerunt.

ziatur, hilaritatem tamen

tur. Durat hæc chorea quatuor dierum spatio; in fin

Transacto primo biduo solent mascres ipsas separare, &

Bo

corpore, eodem ferè servato situ, ceteri
mutâ copulâ, brevi, reliquóque vitæ

foràs elongato ano, ova in subjectam humum vel lanceolam pro

dam concrescente succo in ovaru tranco quasi singula dctine
rio tricenta adhuc remansisse observari, & in fœmellis, quæ masculo concubitum non
sunt passæ, frequenter ovorum loppinarum fœtura, ità ut parum vi

Perdurat Papilionum vita juxta diversam aëris temperiem; nam vigente æstu
t *Augusto* Papilionum juxta aëris temperiem ad men-
phant humoris stagnat.

fœminæ colorem, qui in tubis etiam efflorescebat, sensim
ut Aeronon quis zephyrum Papilionis.
colorum mutationem multum juvat
septem dierum spatio hoc totum peragitur negotium, & inge
protrahitur hæc colorum mutatio. Non
etenim, quæ subventaneæ sunt, quorum *scil.* fœturam non
priorum concubitus, primævum cit

cunda, eduntur, in quibus Citrinus perpetuatur color.

neis verò ovis frequentissime tanta excitatur [illegible] cavitas & depressio, ut contusa vi- [illegible] nova. In altero [illegible]

ere potui ut mox apertis ovis, & adhuc humectata e [illegible] tta furculis ferè diaphanis exaratur, qui [illegible]

gat in ovalibus istis corporibus, [illegible] in reliquis v [illegible] via foramina in Gallinaceorum ovorum [illegible] testis [illegible] cujusdam facci, qui in recentibus ovis, d [illegible] rigui admoventur, à superadictis stigmat.

[illegible] ingredientibus liquoris maculæ, & progressus in inclusis nihilominus hærerent, e[illegible] ar stigmata insinuati atramenti emergere in subjectus [illegible]s, & in [illegible]

[illegible] , [illegible] rotam ætatem in cella [illegible] [illegible] piant, loc[illegible] sparente interim vere, vino & aquâ c[illegible] mixtis, modicè calefactis, alper[illegible], & [illegible] linteo, s abradantur. & tandè prope finem *Aprilis* blando mulierum calore [illegible], [illegible] Bombyces erumpant

[illegible], [illegible] Nam ipsius ova s[illegible] [illegible] [illegible] [

Conclusio Auctoris

Sed [illegible] est [illegible] quæ quidem texenda [illegible] quæ [illegible] [illegible] [illegible]

MARCELLI MALPIGHII
PHILOSOPHI & MED:
BONONIENSIS

DISSERTATIO EPISTOLICA
DE
FORMATIONE PULLI IN OVO.

SOCIETATI REGIÆ,
LONDINI
Ad Scientiam Naturalem promovendam
institutæ, Dicata.

PRÆFATIO.

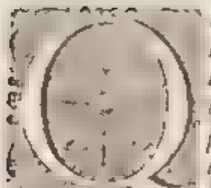
Animo ita vivipara ex Ovo, non secùs ac ovipara, e tunicâ, de quâ [illegible] præterea [illegible] Viri simios viros etiam demonstravit Cl. Mal[illegible] *in Dissertatione sua de utero & viviparorum ovis:* Porrò quâ ratione, [illegible] formari, & fœtum, seu potiùs explicari incipiant quæve prius aut [illegible] fingi hoc, vel non sibi Natura præscribat pensum, donec stupenda illa Animalis Machina [illegible] perducta atque omnibus numeris absoluta sit, id nondum satis Anatomicorum [illegible] Hæc nos absolvere exaggeratius est nobis consilium ovo [illegible] dissecandi, [illegible] adeò ejus [illegible] tenuis, [illegible] delicatior, tali aptè [illegible] quatus est solertiâ, atque iteratis experimentis, quicquid per hoc negotium [illegible] humanitas potest, [illegible] annotavi, [illegible] exemplissimis graphicè expressa. Ad [illegible] pro [illegible] perennitate [illegible] quæ restare videbantur, [illegible] profunde adsusceptum [illegible] præ- [illegible] gratias [illegible] quas [illegible] Arcti- [illegible] fecerunt, & [illegible] vobis magnis [illegible] Divæ Virgini gratia, reposituræ hoc ævo Virtutibus, quæ [illegible] [illegible] quos etiam [illegible] vere [illegible] quos olim [illegible] pro- [illegible] frequentat [illegible] Ceremoniis & Damnatum [illegible] [illegible] [illegible]

EPISTOLA

Gratum REGIÆ SOCIETATIS Animum

D. MARCELLO MALPIGHIO

Pro munere prægresso contestata.



Quam [illegible] Societas, Regie mi, [illegible] super auctis, & pro-ut [illegible], in præsentia eam [illegible] laudes, [illegible]. Tua ipsa [illegible] [illegible] Iuam in [illegible] [illegible] hortationem, [illegible], quæ [illegible], Naturæ [illegible] rutandi operis [illegible] In mandatis [illegible] dedit, ut dictas quamvis gratis [illegible] [illegible] Deo vivo, Iesu nomine Tuo remitterem, [illegible] [illegible]. Tua in Te Sancta tua [illegible] certorem Te [illegible]. Reputat [illegible] [illegible] [illegible] [illegible], Te [illegible] animum, quid [illegible] Naturæ [illegible], cum [illegible], Generata [illegible], [illegible], ad res ipsas accurate contemplandas [illegible], & [illegible] manus adhibet. Et quæ hactenus [illegible], & [illegible] [illegible] [illegible] Deo tua Iesu [illegible] [illegible], [illegible] Deo tua [illegible] [illegible], [illegible] [illegible] [illegible], Iesu [illegible] [illegible], quem primum [illegible], ut [illegible], [illegible], [illegible] [illegible] [illegible] [illegible], [illegible] [illegible] [illegible]

forsan, ubi Tu necdum clare cernis, ampliorem aliquam lucem fœnerabitur.

Cæterum, Vir Clarissime, cum insuper abundè adeo lubentiam tuam nobis significes, aliis porro meditationibus & studiis tuis supellectilem nostram Philosophicam augendi, ambabus equidem ulnis id-ipsum amplexamur, Tibique vicissim quæcunque proficisci à nobis officia possunt sincerâ mente pollicemur. Illud sanè præcæteris (quod jam ante-hac innui) in votis habemus, ut quorumvis locorum cordati Philosophi Historiam suæ quique Regionis Naturalem, genuinam illam quidem & probè elaboratam, condere satagant. Ad tale quid audendum complures variarum Terrarum viros sagaces stimulare jam cœpimus, speque haud levis nos succollat, Te Tuique similes in Italia Naturæ mystas, qua per locupletissimam Patriam vestram Siciliámque notatu digna occurrerint, sedulo collecta congestaque literarum deinceps monumentis summa fide tradituros, inque Gazophylacium Philosophicum, concinnandæ aliquando Historiæ Naturæ Universali destinatam, liberalissimè collaturos. Quo præstito, fore omnino confidimus, posteritatem nostram, quantumlibet seram, excussâ isthac rerum quarumvis Naturalium segete, solertique institutâ omnium inter se comparatione subactâ judicii adminiculo, solidum inde & humanis usibus accommodatum Philosophiæ Systema condituram. Vale, Vir Clarissime, & plurimum salve à

Tui Studiosissimo

HENRICO OLDENBURG,

Soc. Reg. Secr.

DE

DE FORMATIONE PULLI IN OVO.

MAGNÆ SOCIETATI REGIÆ ANGLICANÆ

MARCELLUS MALPIGHIUS S.P.

SOlent in exercitandis machinis prævio operis apparatu singulas efformare partes, ità ut separata prius pateant ea, quæ post modum redigi debent in compagem. Hoc in naturæ operibus plures eosdem Mystæ, circa Animalium indaginem fortem, accidere sperabant: Corporis etenim inspiciendam structuram cum difficultatum sit resolvere, disparatas in primordiis singulorum productiones intuendi avabat. Sed vereor, mortalium vitam incertis minimum finibus claudi, & æque obscurum esse *carcerem*, ac *metum*. Quare, sicut Mors nonnente *Tullio*, nec ad vivos, nec ad mortuos pertinet, ita quid tale in *primævo* Animalium *motu* accidere censeo: dum enim *ab Ovo* animalium solicite perquirimus productionem, *in Ovo* ipso jam ferè animal miramur exercitatum, ità ut veritus noster labor reddatur. Nam primum ortum non assequuti, emergentem successive partium manifestationem expectare cogimur.

Vera mortalium incertitudo in hoc elogium.

In hac quidem perquisitione insudarunt quamplures, inter quos immortalis vester eminet *Harveus*, cujus absolutissimæ observationes adhuc ità orbem eruditum, ut nec nos præsertim labores veluti supervacaneos reseclant. Quoniam tamen, eodem asserente, *latent plerumque veluti in alia nocte primæ naturæ flamina, & subtilitate sua non minus ingenii, quam oculorum aciem eludunt*: ita neque varia Naturæ vis, occulta quasi naturalitate, modò accelerat, modò differt emergentium fœtus: hinc rudia quædam Observationum inchoamenta ex incubatorum Ovorum alteratione, quam adhuc sæpius repetendam propono, me Vobis, Sodalis doctissimi, communicare patiemini, ut si Naturæ & magnus Vestris Mentibus consona deprehendantur, subsequentium

Laus Harveiana circa generationem inquisitionem.

Auctoris scopus.

tione adaugeam,

nomena brevibus indicabo.

tricula magnitudinem habebat *A*, hîc à me ruditer de-
caeteri colons, interdum ovalis *B*, quandoque al-
perfimili, qui irregulari quasi foveâ cont
circulus *D*, aggeris instar, idem coliquamen
tio fuso & liquido alluebatur humore *E*. Subsequebatur
parùm lata substantia *F*, ter varie lanciata, & humore *G* pariter mergebatur.
Aer insuper amphores circ *H*, ab eadem solutionis exeuntis substantiâ circumduce-

adeóque tenuissimæ, ut levi ictu singulæ
ri rata, ac in Plantarum ovis.
fulcrando cicatriculam intuen, quæ utplurimùm

Cicatricula hujus tudinis *A*, in cujus centro auerat Amnion, scilicet *B*,
candido solidoque circu atum aggere *C*, quod coliquamenti aqueo fuloo re
pleb In medio, pu carina *D* una cum capite innatabat. Hujus interior portio

Fig. 2.

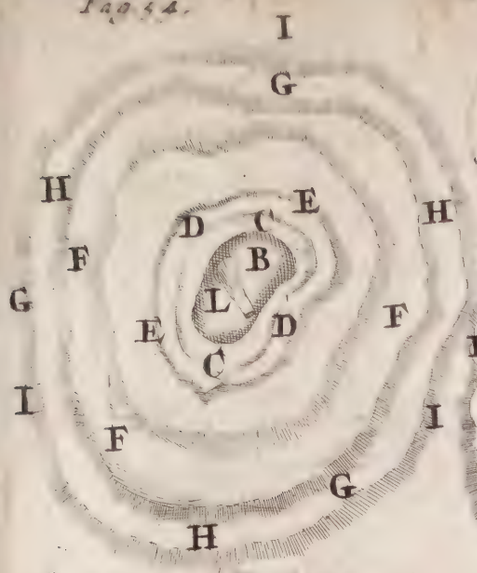


Fig. 1.

Fig. 3.

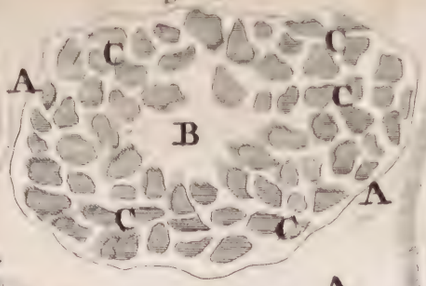


Fig. 4.

Fig. 2.

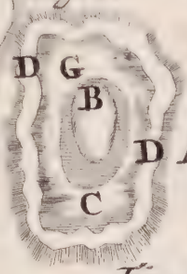


Fig. 5. Fig. 4.

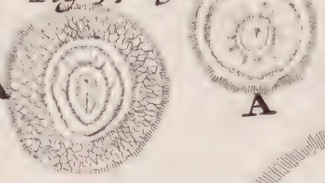


Fig. 6.

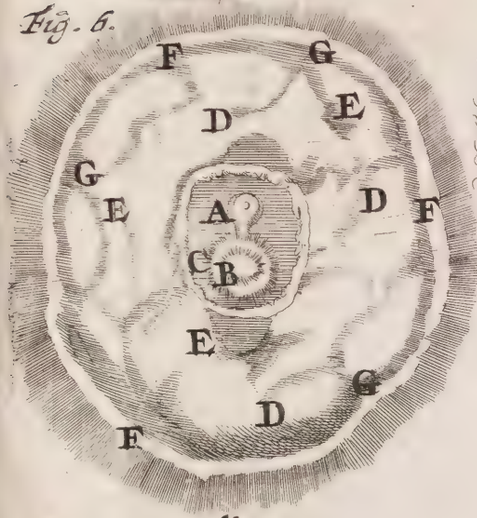
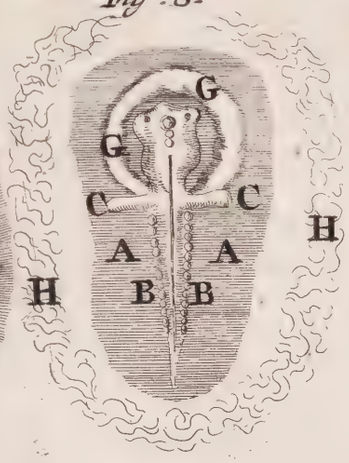


Fig. 8.



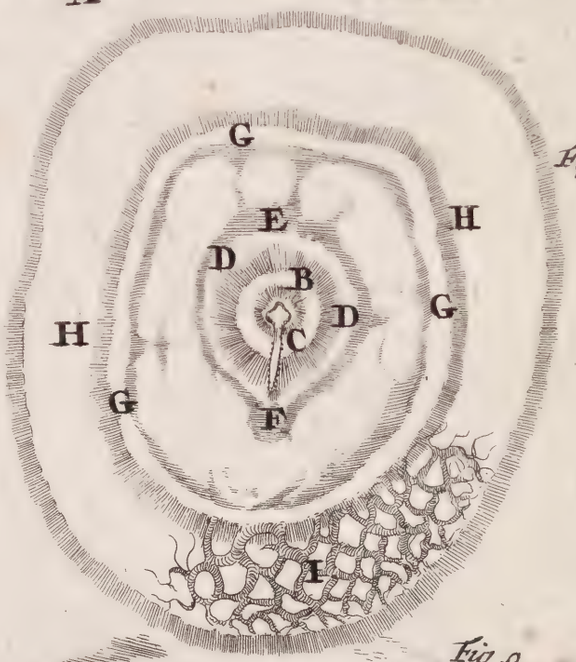


Fig. 5.

Fig. 7.

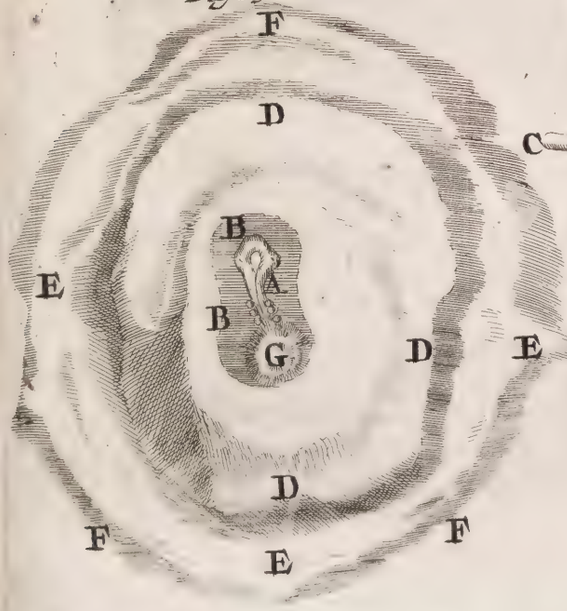


Fig. 8.

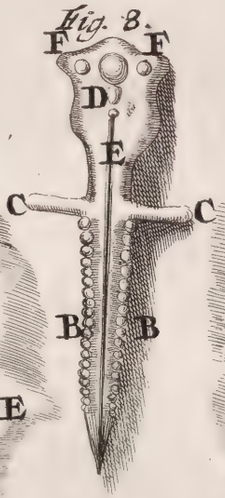


Fig. 9.

dium cornus erat, sed fensim [illegible] ac ab exteriori bus [illegible] lis colliquamento solvel
[illegible] loc [illegible] hori
[illegible]

vel randem obl

Post horas [illegible] es distinctius patebant in adiacta ei Fig. Pull. d
catricula, ma[illegible] tudinis A. quæ sursum emi[illegible]ns ferè horizontalis erat. Disrepto
[illegible]
[illegible] dici orbiculares faccoli, seu
vesiculæ, invicem contiguæ, deorsum excurrebant [illegible] pmalisque medullæ stam na
[illegible]

tenoris ambitûs archiora erant & sensim obliterabantur,
[illegible]
[illegible] ssiu temporis stru[illegible]
limus & alveoli ex fermentato colliquamento viam sibi faciente, de
[illegible]
ex stae
[illegible]

Post *diem integrum* horarum 24, sæpe cic
témque redditam, qualem hîc delineavi,
spinæ candido inchoamento, ve
[illegible]
veolis exterioribus F colliquamento versus D pateret a
[illegible]
[illegible]

pevatur,

audebam

caba-

Fig. 10.

Fig. 11.

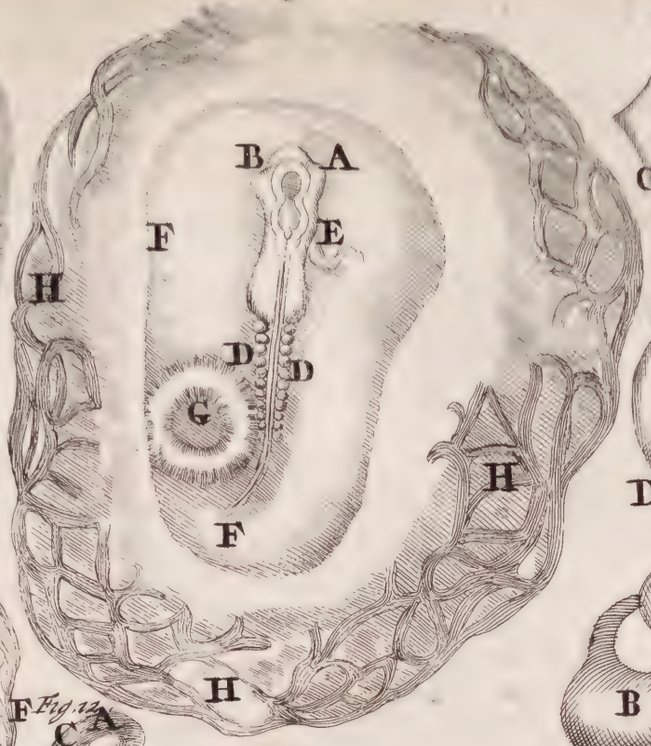


Fig. 11.

Fig. 15.

Fig. 12.

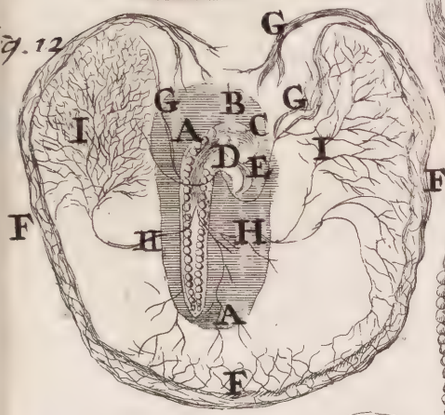


Fig. 12.

Fig. 13.

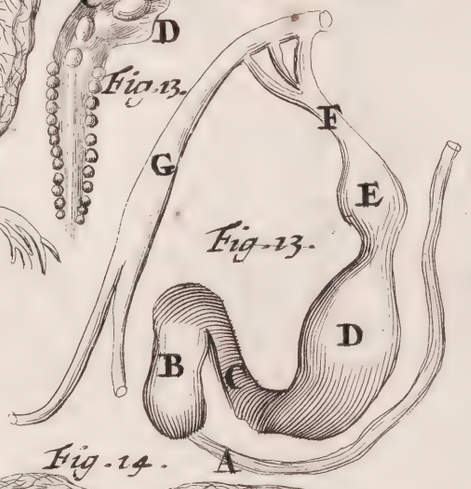
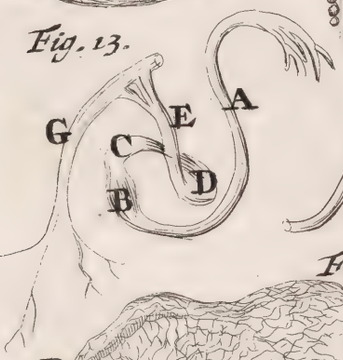


Fig. 13.



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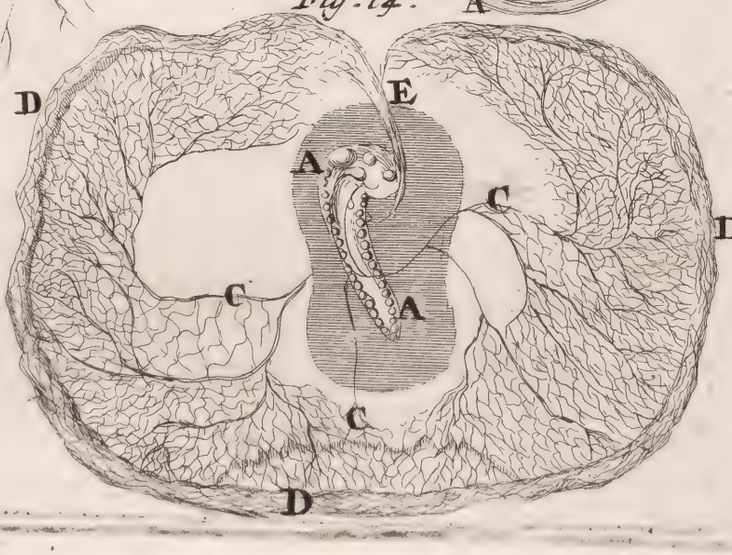


Fig. 15.

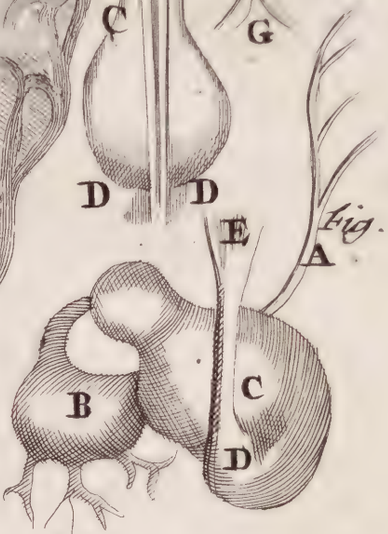


Fig. 15.

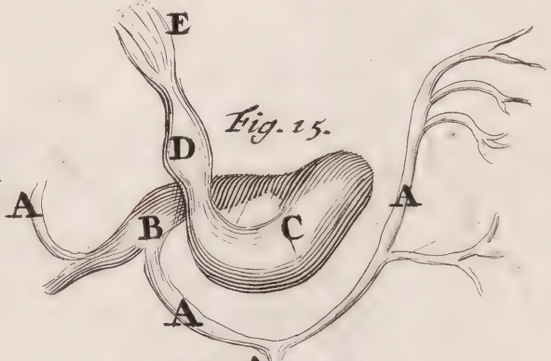
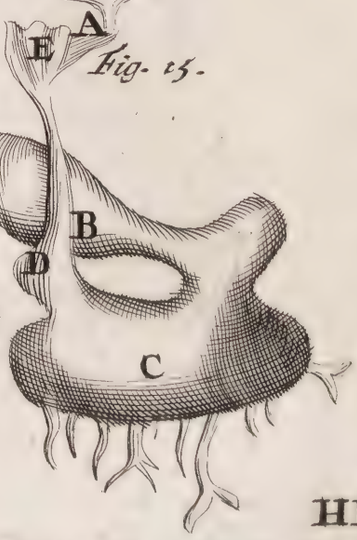


Fig. 15.



[illegible]

tebat aditus, hæc au[illegible]
truncum *G* se elongabat, q[illegible]livisas usque ad extremum carinæ
sùs tamen medium regionem cum[illegible]anos *H* prod[illegible]bat, qui g[illegible]
lis *I* in peripheria absumebantur, exte[illegible]o reticulari plexu, quem in reliq[illegible]
[illegible]
observabatur circa venosum vas *F*; quin adhuc vereor, ne sit l[illegible]
[illegible]
(ut non semel subobscurè videbam) musculosæ c[illegible]æ portiones circumducebantur,
nondum opacitatem aut rubedinem sortitæ. Quare [illegible]qui in
gutta, seu *saliente puncto*, alias observatus est, nequaquam p[illegible]
[illegible]
ti, inducta carne, consectam adulti corporis excitant fabricam.

Difficillimum quidem est sensu ipso confirmare, An Sanguis prior sit exarato
C[illegible]
[illegible]
&[illegible]
[illegible]
[illegible]nam a prim[illegible]
multa ha[illegible]in ipso ex post deprehendantur. Primò namque co[illegible]
species, a[illegible]fœtum deducti, in vasis patet, mox vi fermentationis sub[illegible]
[illegible]us & rubigin[illegible]sus emergit humor, qui tandem rubicundus evadit; sub pol[illegible]
nus hisce natur[illegible]sterno in gyrum pellitur. Quare veteri positum, quod,
[illegible]iones, inducto colore, manifestantur, I
ità partes cordis[illegible]& quod quiescens adhuc præ
[illegible], Ichorem, seu exaratam materiam, quæ postremò r[illegible]ur, Cordis
[illegible]

A[illegible]Ichor primò emergens sit simplex coliquamentum, an vita[illegible]
[illegible]
dyad[illegible]
[illegible]
[illegible]o Plantæ carina sive

truncus cum foliis excitatur, quæ singul[illegible] diversis vasis, successi[illegible] concretus compaginatur: ita in Ar[illegible]ium primæva & immutanda pr[illegible] dubitare fas est; cum suspi[illegible] potuimus, in Ovo subesse p[illegible] fere om[illegible]n conter[illegible]mus facc[illegible]is innat[illegible]em in coliquamento, [illegible] ram patrivis & fermentativis facci[illegible], ex quorum fusi[illegible]

[illegible] facilè (me saltem) decipere possint; ideò irritum prorsus cer[illegible] [illegible]is ea prosequi. Qu[illegible]: redeo ad indagandas successivas pulsi man[illegible]

[illegible] ta tam cito manifestabantur: Frequenter [illegible]m elapso altero die emer-gere solebant, autumno præcipuè, & v[illegible]e, ut sæpius mihi accidebat. Inter o[illegible] servandum, in obscuro etiam [illegible] Corde *lucem*, etiam [illegible]

[illegible] rimum consimilis occurrebat sp[illegible]

[illegible] centro; q[illegible]

[illegible] & q[illegible]

[illegible] D, & [illegible] E, [illegible] F, & [illegible] bicalia vasa *G*

[illegible], ut subobscurè videbam; cujus necessitatem [illegible] &

[illegible] ductiones esse subjectorum Umbracalium vaso[illegible].

[illegible] hquamento *A*, curvo capite, pronus jace[illegible] *B*, fa[illegible] vatis irrigatæ, cum oculorum inchoamentis *C*; spi[illegible]is item medulla per[illegible]

Fig. 16. Tom. II. Pag. 58.

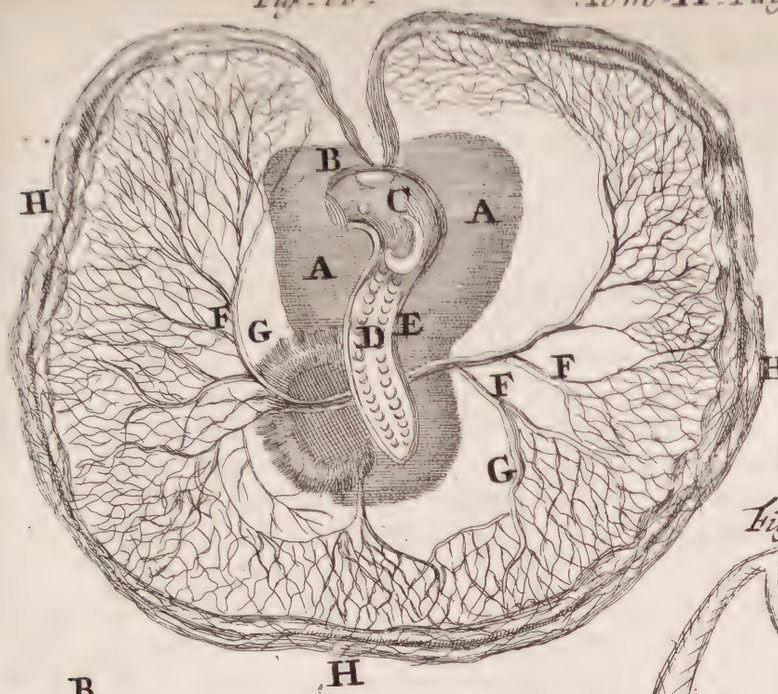


Fig. 16.

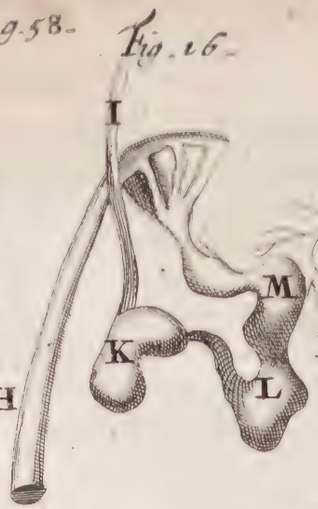


Fig. 17.

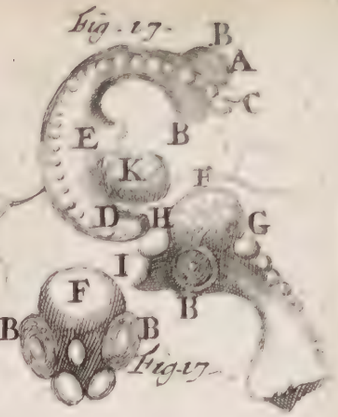


Fig. 17.

Fig. 18.

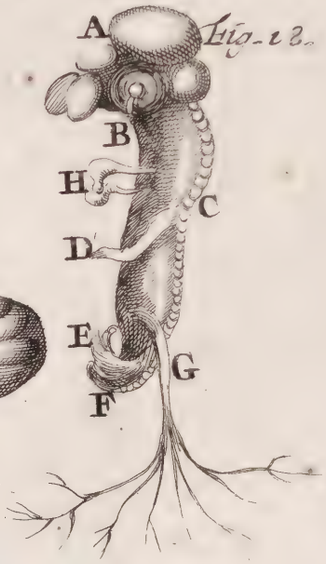


Fig. 13.

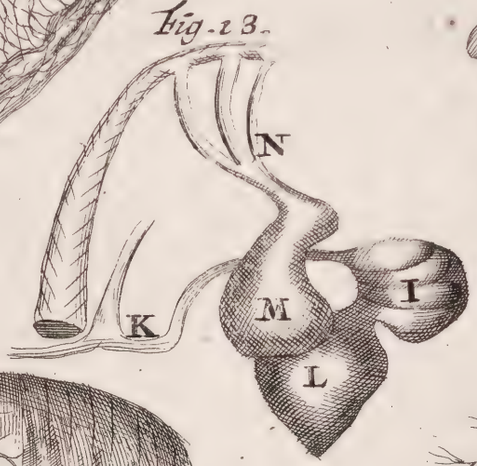


Fig. 15.

Fig. 16.

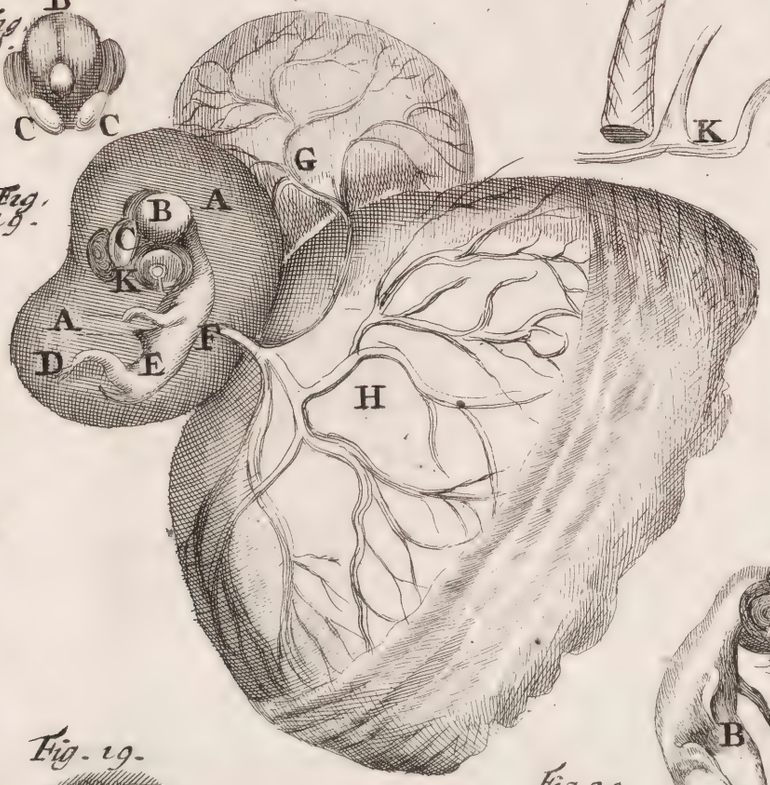


Fig. 17.

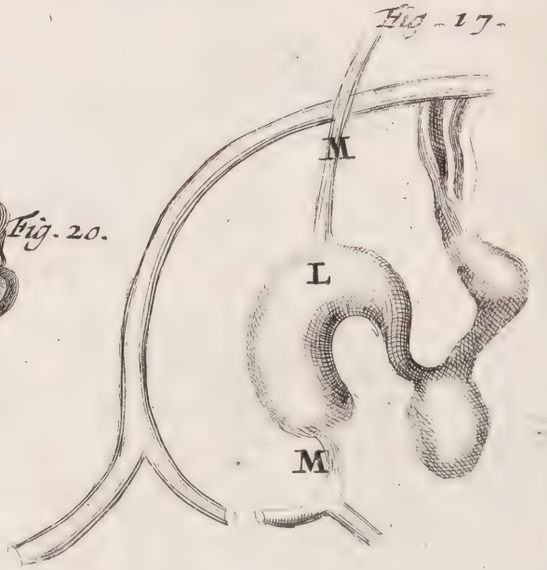
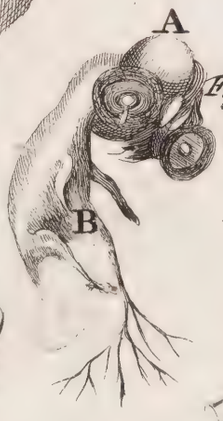


Fig. 19.

Fig. 20.

Fig. 20.



[illegible] tis, umbilicales arterias F, & venas G etiam, promebant: Patebant au[illegible] tudinem cum arteriis acquisiverant. Extremus Umbilica[illegible] pulsu edito ipsum propellebat in cordis ventriculum L, qui constructione medâ pallidus efficiebatur, & in proximum ventriculum M, & tandem in aor[illegible] habitus, & umbilico communicabi[illegible] quibus coagmen[illegible] patebant. Vesicularum, cerebrum inte[illegible] vesicula G addebatur, sinciputis verò profundam pa[illegible] tenebat ovalis vesicula H, cui proxime locabatur[illegible] Corporis habitum inducta caro [illegible] eminebant, & ipsorum pupilla nigra, circularique zonâ in ima p[illegible] mutâ excitabatur, centrum verò crystallinus vitreo contentus tenel[illegible] pulsabat motu, veluti finis distincta ventriculis, & ita [illegible] [illegible] [illegible] ous magis pate[illegible] [illegible] [illegible] a recurva prom[illegible], &

[illegible] ventriculus *L* conflectam fortius figuram, ſiniſtro *M* [illegible] reddidus, retracto aortæ principio *N*, ſenſim debitis [illegible] cuoribus ovis, clauſâ levi tunicâ thoracis cavitas [illegible], & ventriculus [illegible] cumbebat ventriculo.

Poſt [illegible] alveoli, non diſſimiles a cicatricis rivulis, excavabantur.

[illegible]

Septima

Fig. 22.

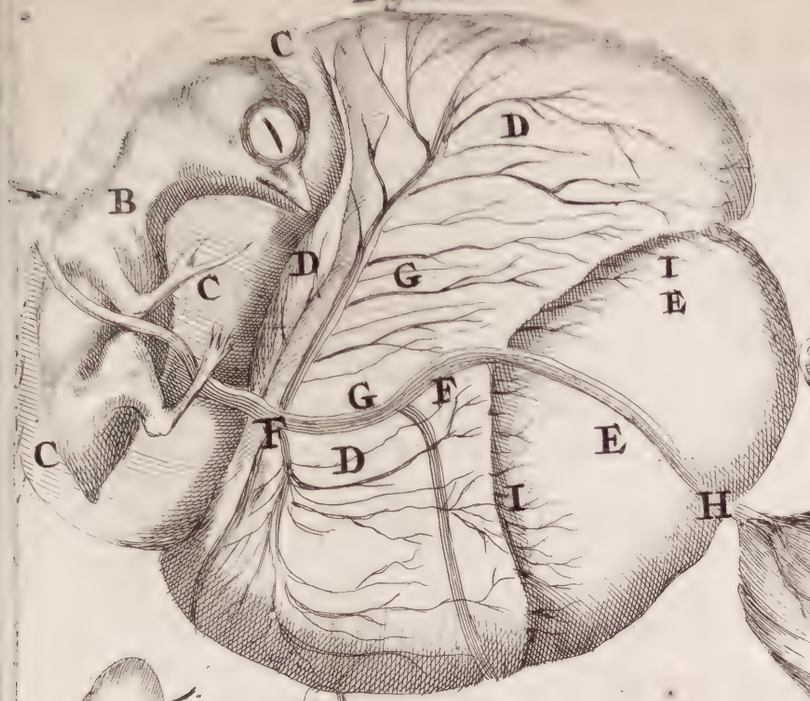


Fig. 21.

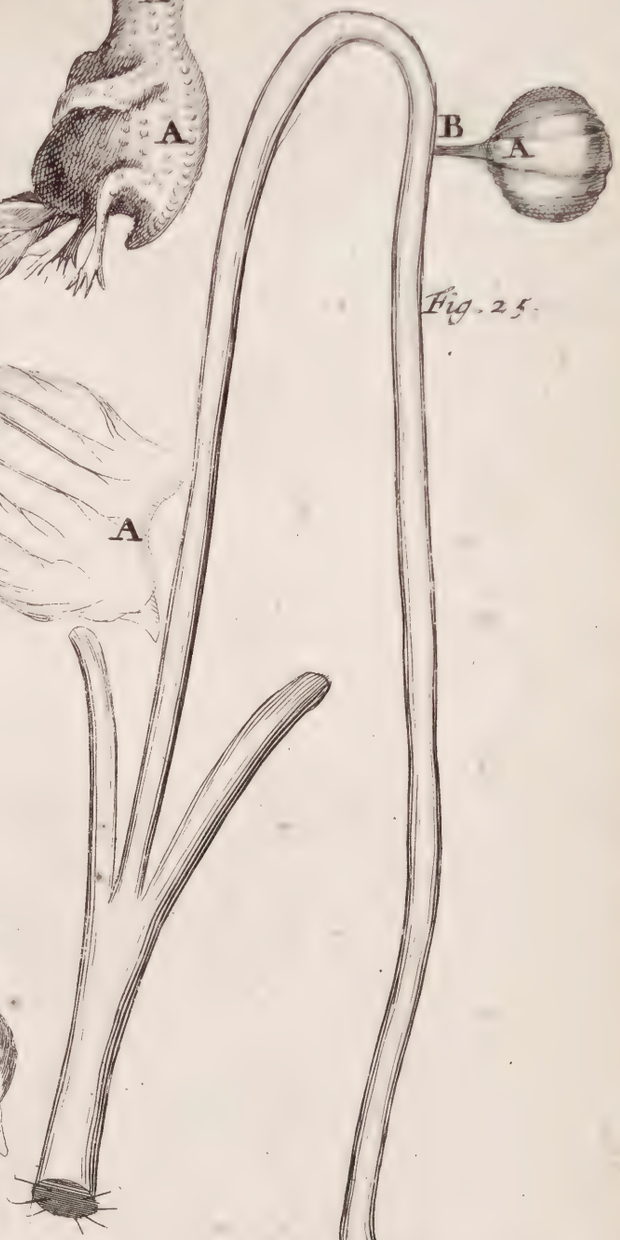


Fig. 22.

Fig. 24.

Fig. 23.

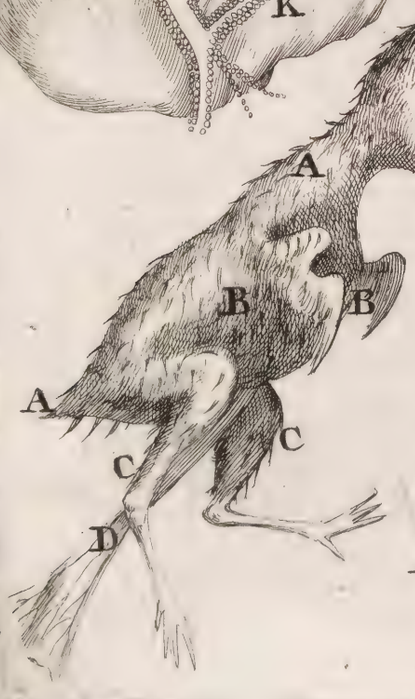


Fig. 24.

Inter amplos oculos sensim erumpebat rostrum. A & ter B tumidus turgentibus

intestina gracilia & alba.

la intestinula (velut in hernia accidit) admittebat. In apertu gimosum, in lobos divisum, soliditatem acquisierat; nondum

a bumus fusiorem continebat, cor instar substantiæ, talis occurrebat

recipiebat, lata enim vena B in tenuis albuminis tunicam A deducebat

[illegible] FORMATION [illegible]

is componebantur rectangulariter implicatis; ita ut arcæ & spatia diver

ne extenùs carnosa quædam labia patent
admittebatur umbilici portio extra
pebat, qui sanguineis vasis spiraliter ductis circuma
taculatea alborum ductuum plexus
candidâ aspersum subsistentiâ: A
foetum deducatur, an verò sit chalazarum veluti
plexus intra abdominis claustra custodiebat

ur, & paùm laceratis subjectis tunicis pulli rostrum cum
set, quare à gallina quandoque corticem aperiri cre

ebam, in compendium redactas tumultuarie Vobis exara
nent. Successivam et
. Hoc unum a e ad pulli exitum. Id
in ammio, qui in tenello tamen pullo sec

[illegible] sed lucu-
lenter insuper fermentativis succis ditari, quæ analogi sint *lymphis*, cæteris que humo-
ribus à glandulis præcipue cæterum habitus separatis, [illegible]
præ cæteris obtinere, & à primordiis pulli humidæ alibiens, aut [illegible]
ram sæpius dubitando cogitavi.

Pro cæ[illegible] intelligentiâ, at nos est adnotandum esse Sperm anicorum vasorum Galeni delineatio, & præcipue ornamentum illius, quæ ex ampullis pentes, semen fundunt, Cui [illegible] præter Oya [illegible] quibus glandulæ [illegible] copia cæteris [illegible] differo labores, & alias, Vobis ita conscriptis, ulteriori institutâ indagine exponam.

Cæt. alia desunt.

Q[illegible] & V[illegible]rorum fœtuum perquisitionem, cum pertinax [illegible] & regia [illegible] pendium exigat, jam pene desspero. Paucas interim hasce observationum adnotationes in tam grandi operis inconcinne collectas, [illegible] quas averis, humanitate excipies, solis doctissimi & [illegible] institutæ attentione, vestros laudate labores, vel perpetuo tenuit, habete. Dii valeatis.

Datum Bononiæ calendis Februarii 1672.

EPISTOLÆ

EPISTOLÆ QUÆDAM

Circa hanc de

OVO

DISSERTATIONEM,

Aliáque ex occasione subnata ARGUMENTA, ultro citróque scriptæ.

I.

Clarissimo Viro

D. HENRICO OLDENBURG,

Regiæ Societatis Secretario,

Marcellus Malpighius S P

OBservationum rude inchoamentum, quod ex ipsis annis primis in Incubatis Ovis tentare, ut me usum recipere Vir erudite pronè S.to, amplissimam nam & prædivitem esse provinciam, & jam fere ex toto occupatam. Quæ utrùm tamen in re tam obscura vera sint occinisse, brevibus examinare petere ne graveris, & si non omnino indigna reperies Regiæ Societati *exhibere, cujus censuræ si quæ unquam alias, &c.*

Transmissam elapsis mensibus de Plantarum Anatome * *Epistolam sub censura Vestra Exercitum Clarissimorum versari, libenter audio, ipsorumque sensum avide exopto. Ex*

mas imperii. Tibi gratias ago ob propensum tuorum erga me affectum. Ut
brum quorum tu es, de tranquillam studia, ubique fore exploratum. Adhuc
ne cum Exo Domino certamus, nondum omnia nostra hanc exoptatam
tentem cum optime agantur, superva adversa undique conantur. Hoc faciebat, ut vel
minus assiduum tuleri esset. Nec quicquam nos apud nos in tuam jam profectus Tu-
Rei Aug. is me locare epistolas, Tibique addici pectus, fovere ne desine. Datum Bononiæ Cal
Februarii, 1672.

II.

Celeberrimo Viro

D. *MARCELLO MALPIGHIO*,

Philosopho & Med. Bononiensi.

Henricus Oldenburg Felicitatem.

Præcanam gratumque adeo tersas ingeni juxta ac industriæ tuæ libertatem, Vir Celeberrime, ut vix verba, appetam, quibus studium animorum nostrorum in Te affectum, erga par esse, explicemus. Vix ego enim nam de exantlatam Anatomiæ Dissertam experimentis, quam, cæ novam & accuratam de Ovo prius, quæ Pisa humanas, Dei ornamento, ex succenturiatam, accepimus. Et hanc quoque cura meam Societati Regiæ exhibes, quæ non modo ad nos, ut ejusdem utique cæ mihi meditatis, cum exempl. Patebat quidem, quæ is Cor[illegible] tum auditus, tum me, quos equidem ut quamvis pro Tua ingenii conspectu [illegible] Adeo acute, adeo exacte, adeo ingeniose, adeo mire quæ mihi meis præsertim hoc in [illegible] adornasti, ut præsum, quo [illegible] amoveat. Ovi philosophico, proximis effigiare videatur. Deinde quam pro exi[illegible] mitro candore tuo, meis laudibus decorare, quæ nimis M. [illegible] favore dictis. Laudum præconia accumulas [illegible] da illi reliquæ, quo ipso cæca genuinum Te Societatis Regiæ [illegible] Naturæ nostram præstas dum [illegible] exercuere modis omnibus allaborat. Mirabor, ea Declame, quod plane nos una ut alterum in [illegible] nate Te occupant, examinat, [illegible] fur ne vel [illegible] Mihi tum [illegible] exhibere argumentum ait [illegible] tu ipse ad cervas propria, [illegible] ordinis ut una cum [illegible] patris Naturæ [illegible]

Ut nec à quâd unaquam justitia in nostra Te posita Societate, ut quæ Tibi supperunt [illegible] bus jam communicandis à Te exponantur, ne ulla ratione premas aut [illegible] ge [illegible] Pl[illegible] exercita de meate Te [illegible], ut Tibi [illegible] Pro [illegible] dare, epistolam mittas, [illegible], ut omnibus nos Typis quamprimum pateat notitiam, & summa quamcumpetentia, imprimatur.

Experimur non raro in [illegible] vocabulis, quæ primo quidem intuitu & ratione [illegible], cæteris [illegible] videantur, [illegible] esse, plura tamen ut [illegible] inter nos in hac nostra Societate nostra Dei [illegible], ut non [illegible], vereamur, ne quid [illegible] exinde [illegible] esse, nisi perspicuum nobis esse, omnia Te prius explorata habere.

*Jucundissimum [illegible], & Urestantissime, scire abs, quam copiose, quamvis & generose cum [illegible] esse pergas, Sparsamque quam nactus es, prolixe exornare. Præter cæteras quæ de Plantis in hemisphæro cisatlantico recluso patet exoptissima nuncupatione, [illegible] [illegible] Te habere de Variis tibus Operatis Observata, quæ tractandi materias Non [illegible] [illegible] quæ ima vox est, sed plane cohortamur, ut quæ de istis etiam pro [illegible] ima indagasti, exponere ne graveris, [illegible] adhuc veterem voremtatem tuam, tuorum non à [illegible] negatam, quam de Quadr[illegible] [illegible] [illegible] [

[illegible] coram intelligentiam paratas servabo, ut sedulo, quæ ad brevitatem inquisitionis hujusmodi [illegible] non admodum dissimilem aciem, mihi [illegible] comparem, quæ ad Lectionem illi, Regi Naturæ arbitro [illegible]

[illegible] tam obscura nobis dabit intricata, & Adversos perquirendos, vim mihi tam [illegible] Communis & Cæteris [illegible] deprehendi, & errori deputetur [illegible] Tuam. Quæ [illegible] opportunas [illegible] & Gratulationes [illegible] opportunam [illegible] adhuc [illegible] Tuam [illegible] Nostra [illegible] Nostra [illegible] Non [illegible] Nos [illegible] pro [illegible] Lucas [illegible] Socratum [illegible] Bononiæ [illegible] Aprilis 1672.

II V.

Celeberrimo Viro

D. *MARCELLO MALPIGHIO*,

Philosopho & Med. Bononiensi,

Henricus Oldenburg Salutem.

[illegible] Regiæ Societatis, vir Celeberrime [illegible] Tuæ [illegible] Nos [illegible] Philosophiæ [illegible] Tuam [illegible] Nostra [illegible] Bononiæ [illegible]

[illegible] *papiros dicentur, haud minus quam Ovipara, ab* [illegible]

[illegible] *ne in Italia vestra Anatomici observaverunt fere perenn* [illegible] *& me dicente de veretris tua Cl. acem linnoyssimam vidi.* [illegible]

V

Clarissimo Viro

D. *HENRICO OLDENBURG*,

Regiæ Societatis Secretario,

Marcellus Malpighius S. P

Sero ad nostras appellit ores C [illegible] *me Ovat novissimum, quem titulus, de O* [illegible] *& Utero opus, ob bellicos tumultus, quibus premitur Occasus, admodum serotinus prodeat: cum tamen Typis posuerim Exemplum certum est in Germania habitum Ovi reperiri eam in super navis Bitorium usurpatum, & Uteri Tubas extrem. omnino conformationem habere, quam fabricæ Ovium portio papillet unde eadem via & ovorum introitus succedit. Mentio, me in nostri Muliebre opum in Tubæ extremum ob* [illegible] *& imper pro manibus habui muliebrem Molæ incrementum, quod ovum erat,* [illegible] *habita contextura pollebat.*

Tractatio vero post amas selectas mihi vix receperam, ac Observationum tabulam fulcrem, sed incassum, singulo namque die ut illorum tenacitate vexor, [illegible] tantis invisendi cura, & doctorum erga me benevolentiam perpetuam testificandi desine. Dab. Bononiæ, *d. septimâ* Junii. 1672.

V I.

Clarissimo Viro

D. HENRICO OLDENBURG,

Societatis Regiæ Secretario,

Marcellus Malpighius S. P

Sero Mantuanus tabellarius gratissimas tuas literas, Sexto Idus Junii exantlatis, mihi reddidit, ex Cantabrigia. Literis quas nuper ad me Mandasti, spiritu venetos agentis, transmissum innuis, necdum ad manus meas devenit. Exercitatiunculæ de Pulso Editionem, quam profusa Societatis Regiæ humanitas jam peragi, tenuitas non audet. Licet enim rudem admodum hanc Observationum delineationem primo prompserim, quemadmodum ex compacta ad veram humanitatis affectum cum [illegible] adoptassim, & vetus jam, sata jit, tacuerim quoque in eandem authoritatem audere vos agnoscent

Ob graviores curas protractam hucusque mutationem Ovorum perquisitionem, jam pro manibus habeo, & quæ ab eo tempore primum Experimentorum meaque mentis ratio acta attigere, ordinata vero Singula tamen omnibus, nondum absolutis, pro vestra modestia verum delineare contendo Interim Generationis ejusdem momenta verum, sollicitum tamen, in ovis, præsertim primo, fixum me meorum quo Cartesianum concepi abam venenum esse te latum scio, vel facem per te Anglicano ne rumore undequaque supra tuas cervicem cubet, ipsam tamen non animo ve at [illegible] eruditæ perpetuo immitterem tenere tentat, & quanta me undomum haberet facile mihi est intueri, ex inde vero observabitur. Plexum, omnia rosar de quo dubitabam Atlantes [illegible] esse semper deprehendi. Completa observatione, si quæ occurrent, cum dicta, communicabo.

Pulsationum Iconismum tam cito in promptu esse nequeunt, tabi etenim pertinax non pereo, ut longa vate & [illegible] portune meamet manus decem [illegible] ut [illegible] manibus premo ibi, quam novem solummodo effectam cum primum [illegible] tos Micrographi [illegible] ad [illegible] la [illegible] tes, cum [illegible] [illegible] [illegible], [illegible] me [illegible] videre, ut [illegible] [illegible] [illegible]

VII.

Celeberrimo Viro

D. MARCELLO MALPIGHIO,

Philosopho & Med. Bononiensi,

Henricus Oldenburg Salutem.

Magnæ profectò mihi habet, Vir Clarissime, quod Doctoris Grewi de Vesicularum quarundam Animalibus libellus nondum ad manus tuas, quando novissimam ad me Epistolam tuam Augusti datam, scriberes, pervenerat. Vix tamen ullum mihi dubium, quin ex eo tempore Bononiam appulerit, cum jamdiu quæ potui curæ animum meum, tum ut iterum, tum Lugduni Batavorum, eum ad Te quamprimùm transmittendum commendaverim.

Cæterum, etsiamsi Grewianos libros hoc tempore non celeraret Regia Societas (mensibus quippe Julii, Augusti, & Septembris, feriari quotannis consuevit, nemo enim tunc temporis Philosophicas Epistolas summa cupidine postulat) non tamen tibi de illorum Epistolarum summa cupidine postulatum libellum Societatis communicandi, curandique ad Te quamprimùm transmittendi, locum dedissem, quem ex quinquennio.

Vehementer fuisse collætatum perennem tuum in Nostrates affectum, indefessamque in augenda cognitione pervestigationis; imprimis quam in me perspexisti admirabilem benevolentiam, pluribus verbis (quæ tamen decore) Ovi tui initium excipis, nec non abditum ex ea de me parentem Tuum tuum suadere studiose statuisti. Facies certè, quod si, imperatum nominis tui, quam tuo totius Partis tuæ, nec non Societatis Regiæ, erga te patrocinium tam in præsentiarum, de quo cedere animo oportet.

Ad ea quæ consignatorum, quæ ad perdoctam tuam de Formatione Pulli in Ovo *Dissertationem pertinent, libenter per otium, ut spero, non tamen prius respondebo, quæ Tu de Natura Animalculorum in Lacte observata, nobisque communicasti, Nostrorum ordini in Tabulam, aut quoque jam tuisum, nunc jungerem, ut literarum moderatorem, libellum commendandum curarem. Brevi rem totam, dante Deo, pralum consecutus; nec tum decrit (si spes sit occasionis aliquot Tabellarios ad tua Exemplaria navigio transmittendi. Interim sumite pium, Scytli de Gemmarum Ortu & Variis Exercitationem nuper Lugduni Batavorum editarum, Novorum quorundam Experimentorum in re Seri & Ovi Gallinacei medicatorum, quibus brevi, ni fallor, Tractatum subjungo, quo Historiam naturam, ampliamque totam in rem, Physica promendam existimo.*

Disceptatum jam apud nos, quid vera subsit Nova juxtà ac Ingeniosa Clarissimi Newtoni

tem nostræ de Lucis & Coloribus doctrinæ, Transactionibus Philosophicis nuper inserta. Agnovit eam virer doctissimus ac Ignatius Castelli, Societatis Mathematicum in Collegio Clarimontano Parisiensi Professor doctissimus, ac eas de Autore laudatissimas responsiones, quibus hanc ejus (est is ingenuus candor) tuebatur acquiescere est visus.

Veniet fane occasione data frequentiore turbaque, quam hactenus, ista & similia, quæ apud nos deprompsimus, Physicis argumentis ad Te perscribendi. Faceremus id certe summa cum lubentia, atque hac ratione tuam erga Nos benevolentiam quadantenus redhostare conaremur. Vale, Vir Celeberrime, & affectum tuum Tui studiosissimo conserva. Datæ Lovanii pridie Calend. Septemb. 1672.

FINIS.

MARCELLI

MARCELLI MALPIGHII

Philosophi & Medici

BONONIENSIS

è

SOCIETATE REGIA,

APPENDIX,

Repetitas Auctasque

DE

OVO INCUBATO

Observationes continens.

PRÆFATIO
AD
LECTOREM.

Subjungimus hic, Lector præstantissime, Epistolæ Illustrissimi Malpigii de formatione pulli in ovo, aliam observationum appendicem de ovo incubato, quam nos adeò perfectam existimamus, ut ex ea quicquam in eis desiderari posse putemus, nisi ipse Auctor (cui ad seriorem ætatem parcat Atropos) accuratissimo suo judicio ac microscopio porrò illud fuerit prosequutus. Vale.

MARCELLI MALPIGHII

Philosophi & Medici

BONONIENSIS

e

SOCIETATE REGIA

APPENDIX,

Repetitas Auctasque

DE

OVO INCUBATO

Observationes continens

MAGNÆ

SOCIETATI REGIÆ

ANGLICANÆ

MARCELLUS MALPIGHIUS S. P.

Comparatio quædam delineationum a Pictore inexperto, & naturæ rerum imperito, cum naturæ rerum operibus.

Celebris apud Prætores mos est, *Doctissimi Sodales*, quo proficiendarum cognitu gr aphicem, primaque in tabulis lineamenta, dilucide exprimatio phantasiam excitent, contemplatá intuitus tradatione tovere abjiciunt, ne dum imaginationi volunt a oculis per longum corpus remota terga obvertunt, donec inchoatæ prolis nascentes species obtineretur, quam subita post modum operatione examinantes absolvant. Simile quid nobis in contemplandis Naturæ primis ortibus peragendum, manique opportune saltem & necessarium censeo. Sicut enim, eo tempore structa aberrationes, & incompta rudimenta, si quæ in tabulis extant, huc phantasiam animantium præjudicia deducunt movent, & ab eo (non adhuc in formatorem obfirmata, revera judicii impe-

A

...ctis in primordiis Ilii unum indagine effudit.

In Ovo *nondum* incubato, fœcundo tamen ...
...descripta Cicatricula aderat, quæ inter galazas collocata, ...
Ovi cacumina fortiebatur, ejusque naturalis magnitudo lei ... excedebat. In
...tro circulus candidus *A*, aggeris instar, deprel...atur, qui sup...

...a *D* candidus delineata zonis innatabat, ...
...nuatæ apparebant, contentum verò spatium plumbei co-
...e extremitatem faccatus *E* obscurabat. Succedebat rata

...natabatur, quem ang...

In Ovo, elapso ...*f*... *sex* cicatricula
...ta ac fortiebatur magnitudinem *A*, in cujus centro vesi...*B* irregularibus

...tasca *B*, subalbei coloris, quæ interdum foram...alis pervia, pumicis ...
...pamento imadida redd...batur, cujus ambitum rivulus *F* alluebat, & tandem can-
tasca reddebatur, & plures circuli *I* interpositis alveolis *K* circu...

...centro colliquamentum *B* observabatur cum carina, quæ candidis de...

...quentissimè ver... Succedebat candidus de more circulus *E*, qui externis copio-
...lo colliquam...mento *F* ambiebatur; hunc proxima extendebatur area umbilicalis *G*,

...*L*, lato satis. Pulli carina cæruda quadam zona designabatur,
...crescens tumore capitis inchoamenta *M* minabat, & vertebrarum glo...

Fig. 1.

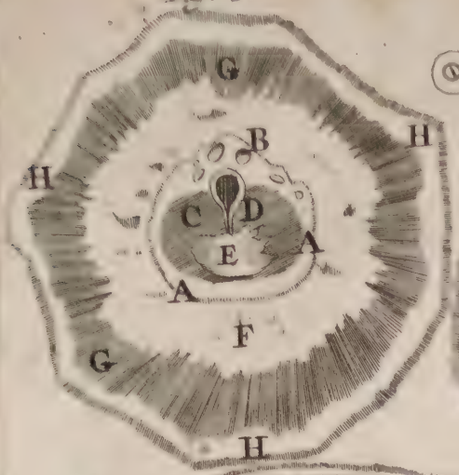


Fig. 2.

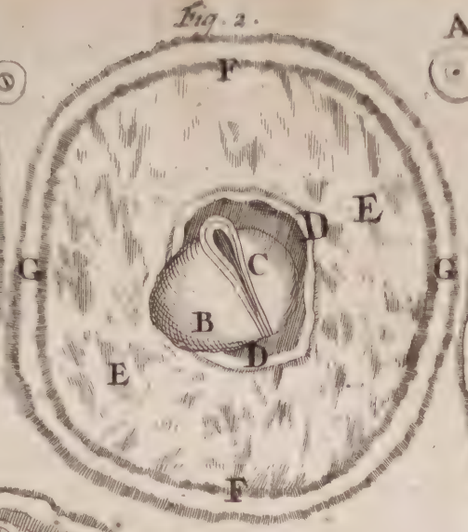


Fig. 3.

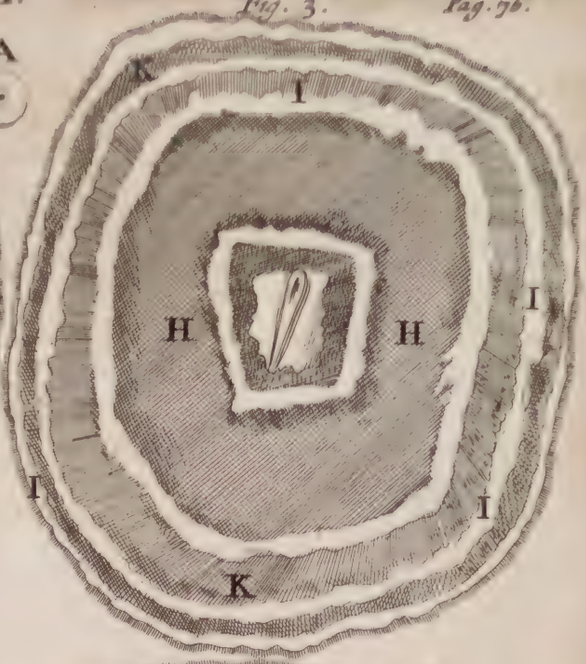


Fig. 4.

Fig. 5.

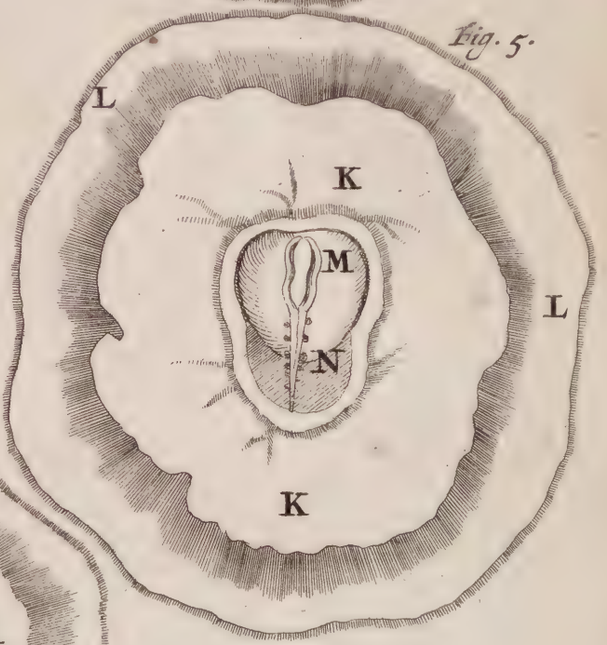
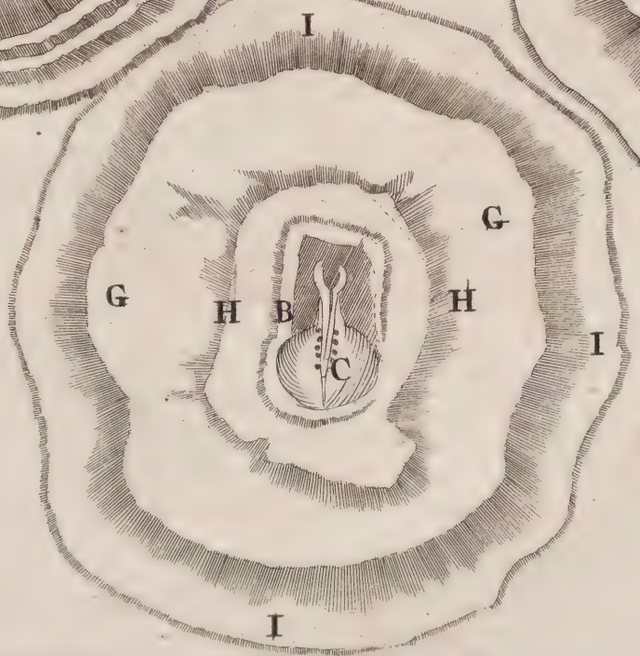
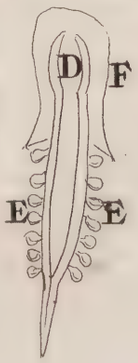


Fig. 6.





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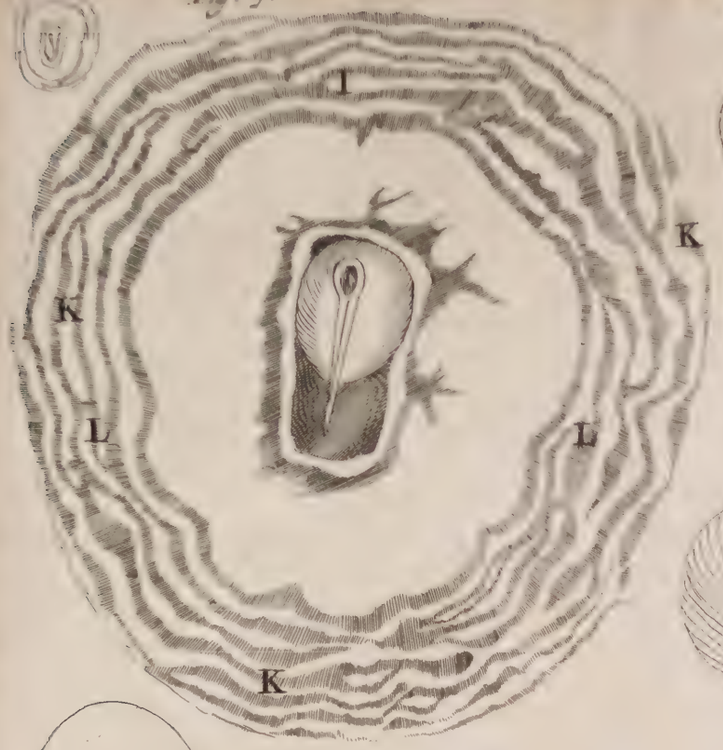


Fig. 13.

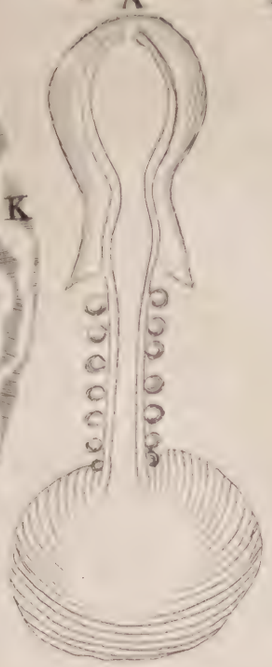
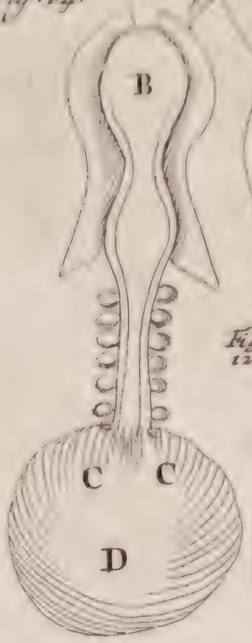


Fig. 14.



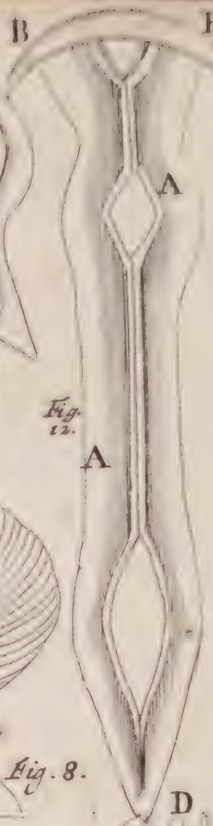


Fig. 12.

A

Fig. 15.

Fig. 8.

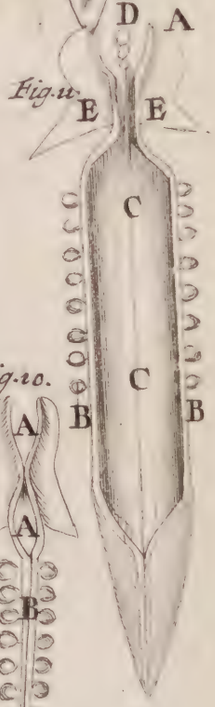


Fig. 11.

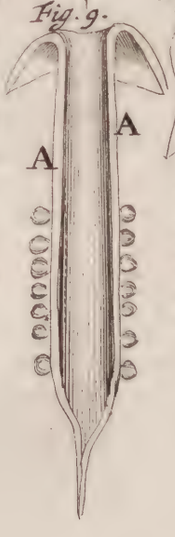
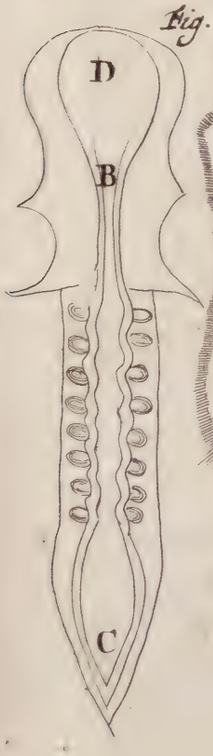


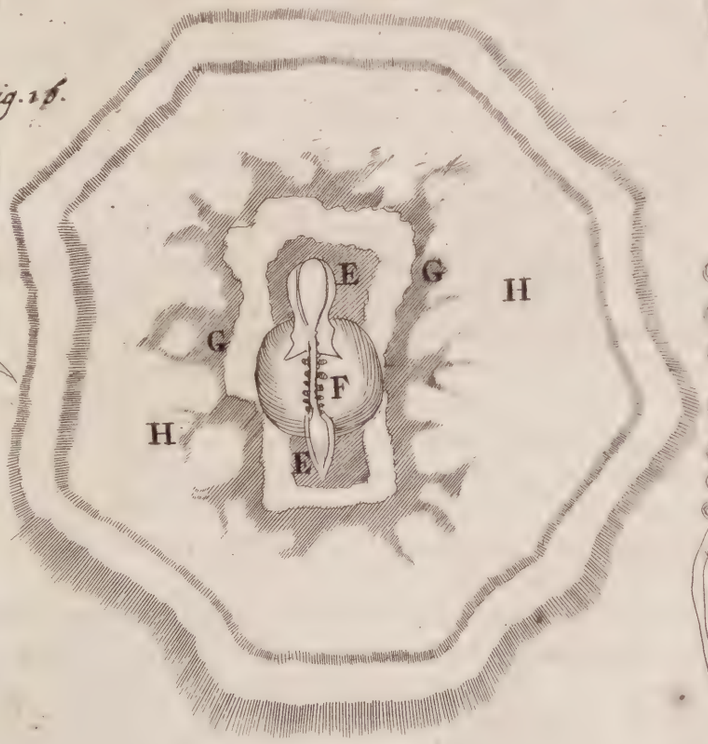
Fig. 9.

Fig. 10.

A

Fig. 16.





P

men ascendebat. In medio colliquamentum solito aggere B
re vehicula C obstruebatur. Carinæ structuram dis
quantam, tamen tenuis radicula. La
tractus cum appensis vertebrarum faeculis E, circa cap
videbam, cum alarum inchoament
hæc area inter observand
menta exstant, an hecetenus corporis
seu zona I, ulterior fermentatione in plures, hotq
culos K, quorum portiones, velut intuæ, colliqua ne

Placebat interea, ut Natur
us vegetus & intimior
candidæque lineæ A, in capite patam d
approximatæ, colum C effumabant, mox dil
præactæ, carinatum spatium
corpus patet. Qu
d, p
A, &
Na
& recte, a &

Cl
Da
Ca
C
J
A
N
E

[illegible] D [illegible] D,
[illegible] Auris namque zona
[illegible] E, [illegible] F, & carinæ ovalis

[illegible]

culam claudet

[illegible]

[illegible] e auabrebantur. Vasorum color primo vitellinus mox

[illegible] n eliam tempore Cor 5 certo deprehendebatur: Et adhuc
[illegible] in vitris exsiccatis servo, in quibus illud profiat

Adhuc hæret animus in determinanda *Crasi* vel *Sanguinis proportione*, cùm repe-
[illegible] nuus tamen minifterio ea nequaquam hæreat. Illud certò con-
[illegible] ncovatum, cam [illegible] flamma obfervari, deinde incubare vertebras, cerebri
[illegible] cum alis, & inducta carnea portione manifeftari,
[illegible] as: Apparentibus autem rivulis in umbilicali area,

[illegible] Plurimum autem temporis intercedit, quo Cor & Vafa

[illegible] aram foveo, quam alias annui, fuccum, Vafa & Cor fortè
[illegible] altere, & fenfum manifeftari, ut in arborian Ovis obfervamus.

[illegible]

[illegible] rupus valerium grandioribus interdum fpatus I
[illegible] ducti, in

Fig. 18.

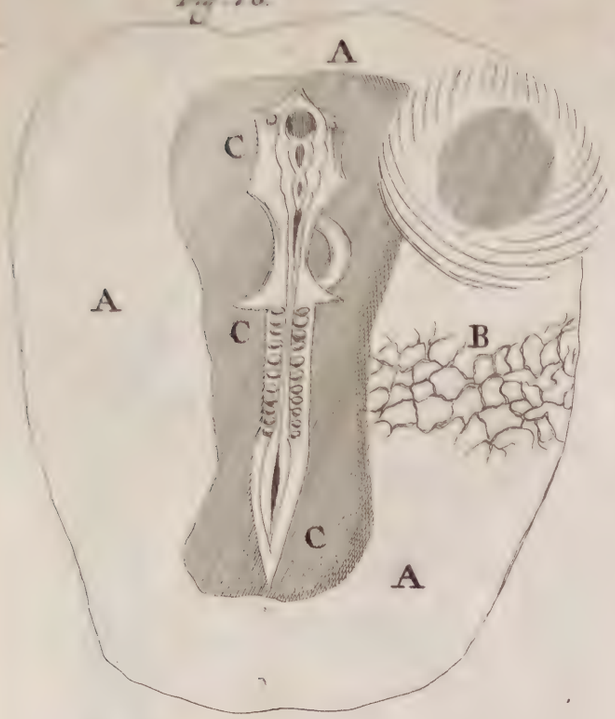


Fig. 19.

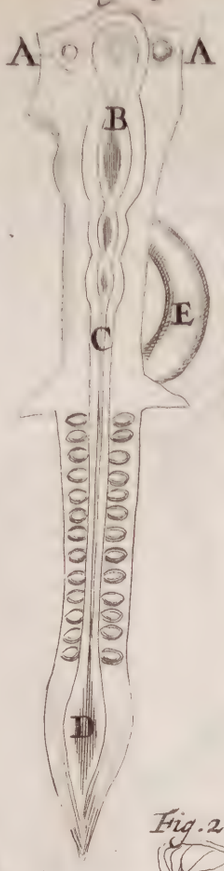


Fig. 20.

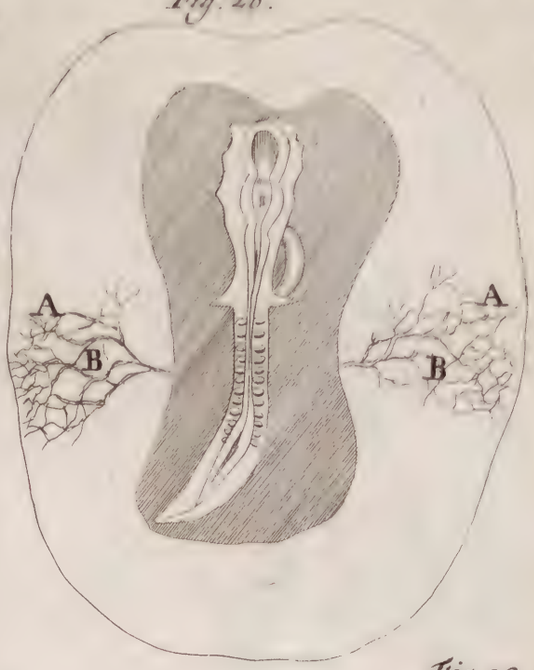


Fig. 23.

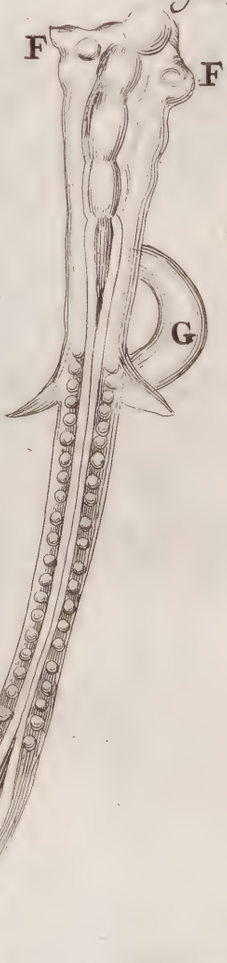


Fig. 17.

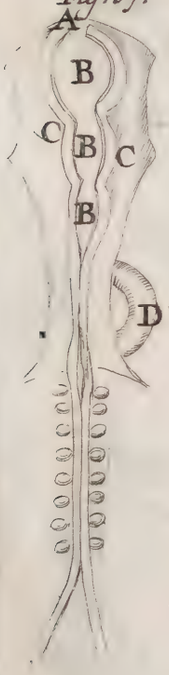


Fig. 21.

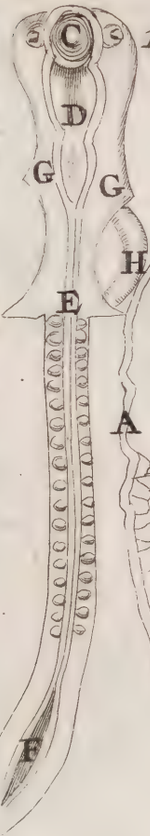


Fig. 22.

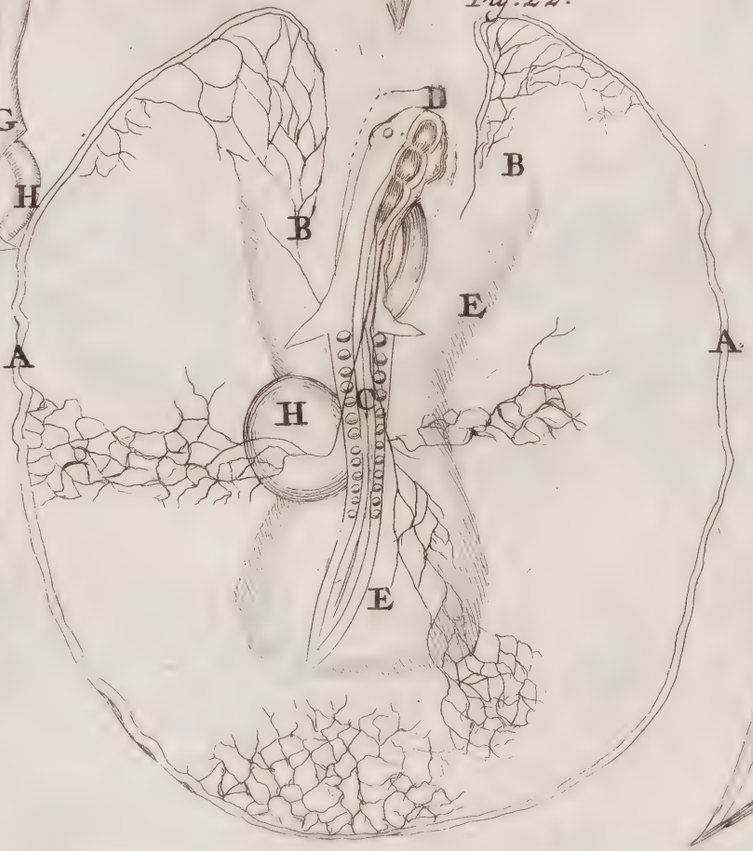


Fig. 24.

Fig. 25

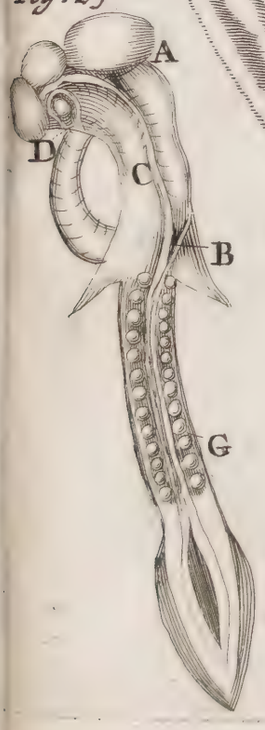


Fig. 26.

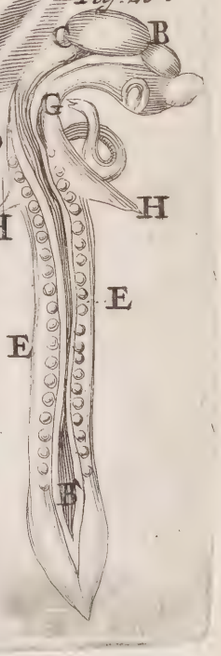


Fig. 27.

Fig. 29.

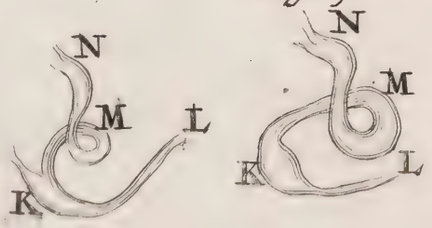


Fig. 28.

[illegible] adultis etiam observatur, caro G circà luxuriabat, &

Superatis *quadraginta horis*, in cicatricula evidentiores [illegible] extremo limbo A in cor produ[illegible]tis B deducebantur, à quo umbilicata vas[illegible] tur. Hac eadem horâ sacculus H variato Ovi situ movebatur; p[illegible] locaretur hujusmodi vesicula H, [illegible] diaphano turgeret humore, tandem, cùm ipsum in separata [illegible] nequaquam inclusum deprehenderem, in subjecta vitelli fovea locari conjectatus sum.

[illegible] erat, & ignavum vasis. In hac itaque ambientes circul[illegible] & [illegible] colliquamento. Spatium, quod inter circulos A & [illegible] batur, infimosus rivulus F a fluebatur, in de[illegible] fontibus deducebantur alveoli G, qui amphores [illegible] fortiebantur terminum. Contentus ichor [illegible] gulosus erat, & cruda[illegible] ac in corde & vasis observabatur; unde pulc[illegible]

Subsequentibus horis usque ad complem[illegible] cosa, colore primo [illegible] Extractus pullus hac polebat fig[illegible] dulla B continuabantur, quæ zonis C, adhuc cartilaginibus am bu bat[illegible]

Post *bini dies* cicatricula lateraliter vitello h[illegible] cum naturalis m[illegible]utudo erat A, & in ipsius centro in colliquamento natans

Fig. 30.

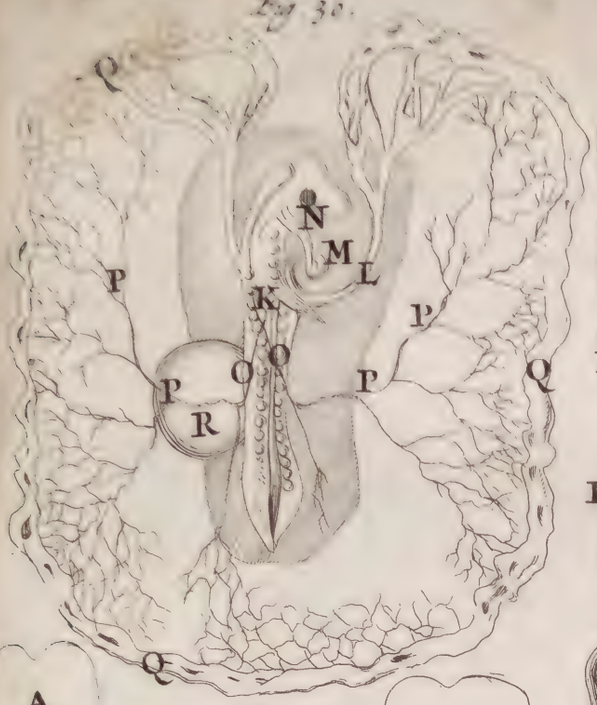
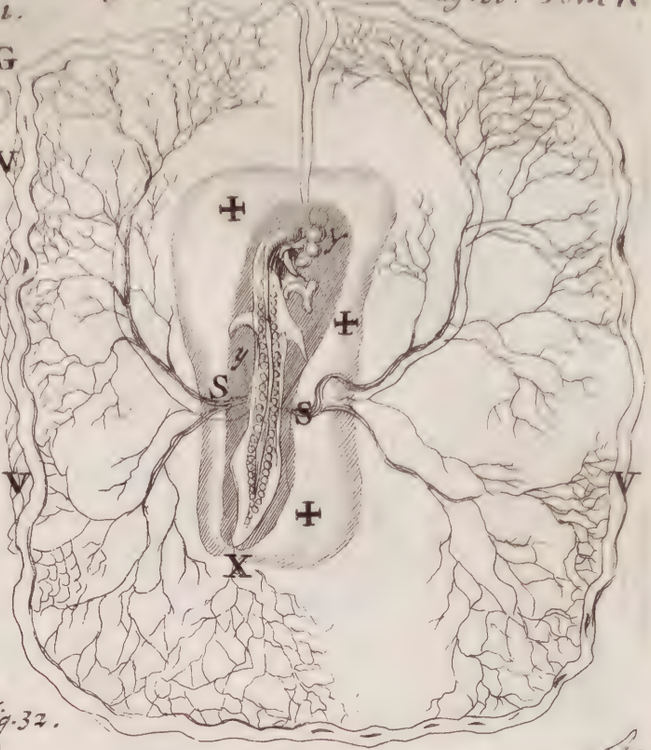


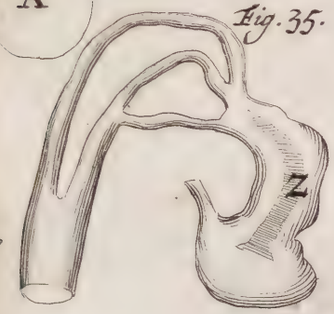
Fig. 31.

Fig. 33.



A

Fig. 35.



A

Fig. 32.

Fig. 34.

Fig. 39.

Fig. 36.

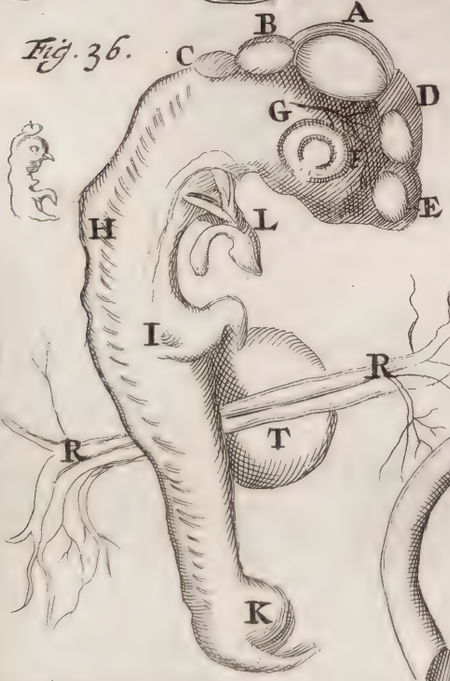


Fig. 37.

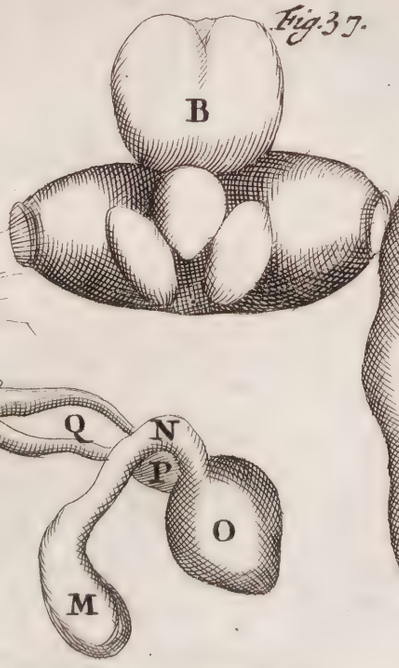
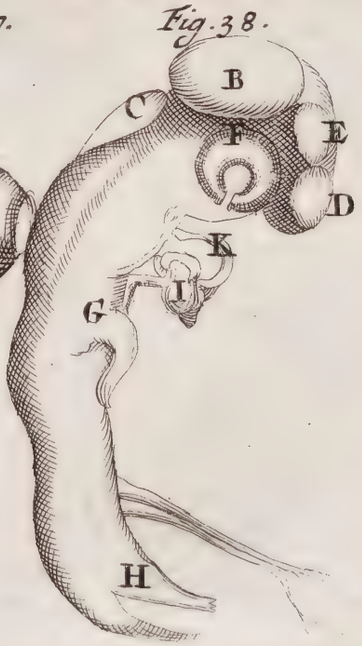


Fig. 38.



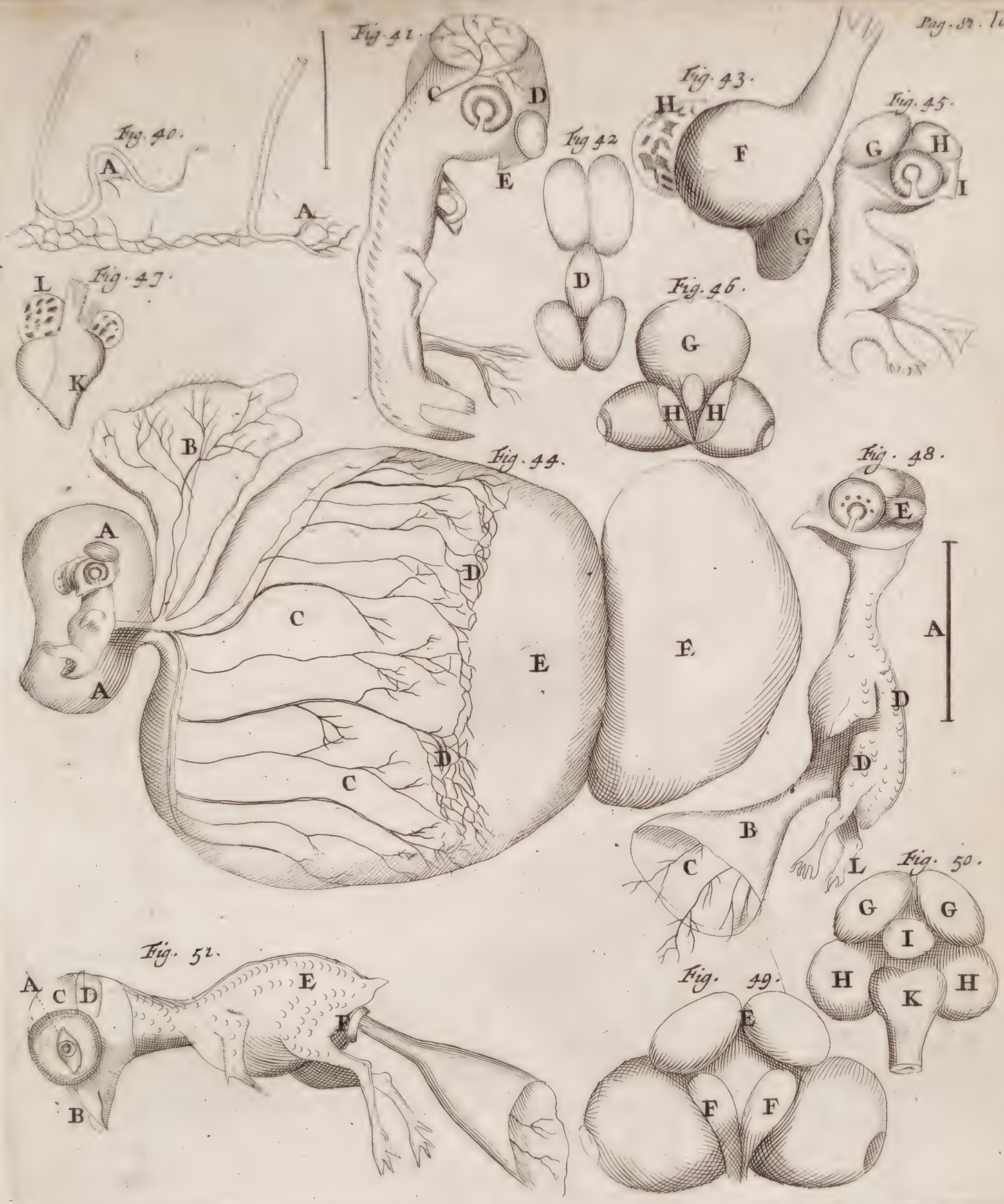


Fig. 40.
A
A
Fig. 41.
C
D
E
Fig. 42
D
Fig. 43.
H
F
G
Fig. 45.
G
H
I
L
Fig. 47.
K
Fig. 46.
G
H H
B
Fig. 44.
A
A
C
D
E
D
C
E
Fig. 48.
E
A
D
D
B
C
L
Fig. 50.
G
G
I
H
H
K
Fig. 52.
A
C
D
E
F
B
Fig. 49.
E
F
F

ebatur per canalem subalbum N in cordis dextrum O, a quo in
2; Cordis structura carne musculosâ
Ab abdomine umbilicalia vasa prodibant, & arteria R latior
vat sanguine, vena vero inferior & arctior subluteo l
latus par-

& pullus in colliquamento degens Post diem quintam
ejus naturales magnitudo erat A. Amplum erat caput,
quod crebra vesicula B ante ebatur; hæc filamentosâ replebatur substantiâ; in
hærebat cerebellum C; ante dæ D, & superius protun-
atur vesicula E, hi Reliquum corporis carne te-
batur, nis G & cruribus pendentibus. Patente thorace cor extra locaba-
quod ventriculo dextro I, & si , comparebatur, superposita pariter au-

Sextâ completa die albumen colliquatum erat, umbilicalium a duas vitelli ter-
rum fines A in limbo spectator reflectebantur, & inæquale
tanto crysta. no cubabat: Sol ad-

septimâ die Cubabat etenim pullus Post diem
pto B ambiebatur, nectebatur autem cranion
bum umbilicalium, quæ
vitellum C producta, inclinatis

, rudè conformatus observabatur, costulæ nivea, &

mucosum erat, oblongis glandulis constans.

[illegible]

functis areis, alias expositæ, contrahebantur [illegible]

[illegible]

servabantur, & rostrum osseum producebatur.

[illegible]

turgente sinus foliculo

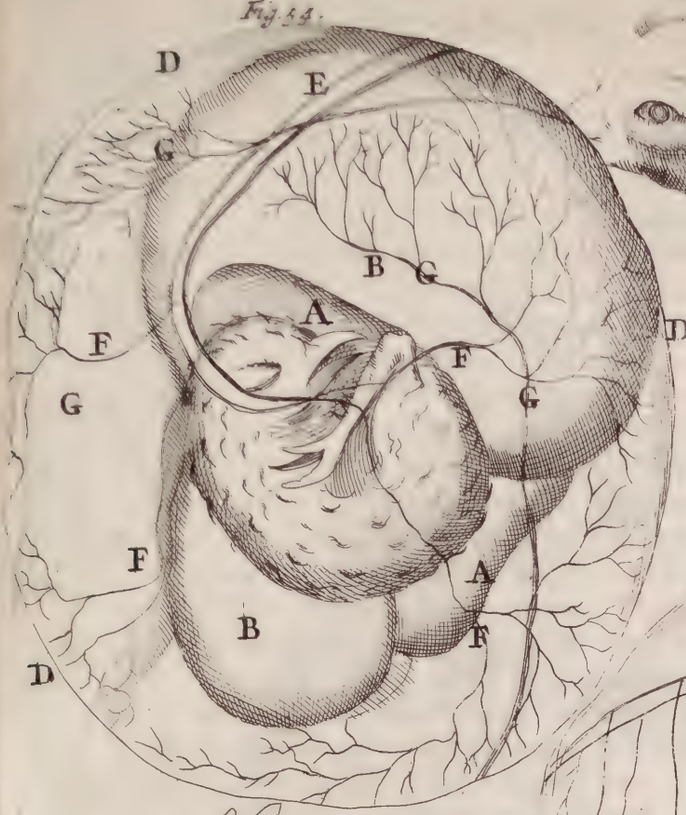
[illegible]

tio in carnosum ventriculum deducebatur

[illegible]

mus

Fig. 54.



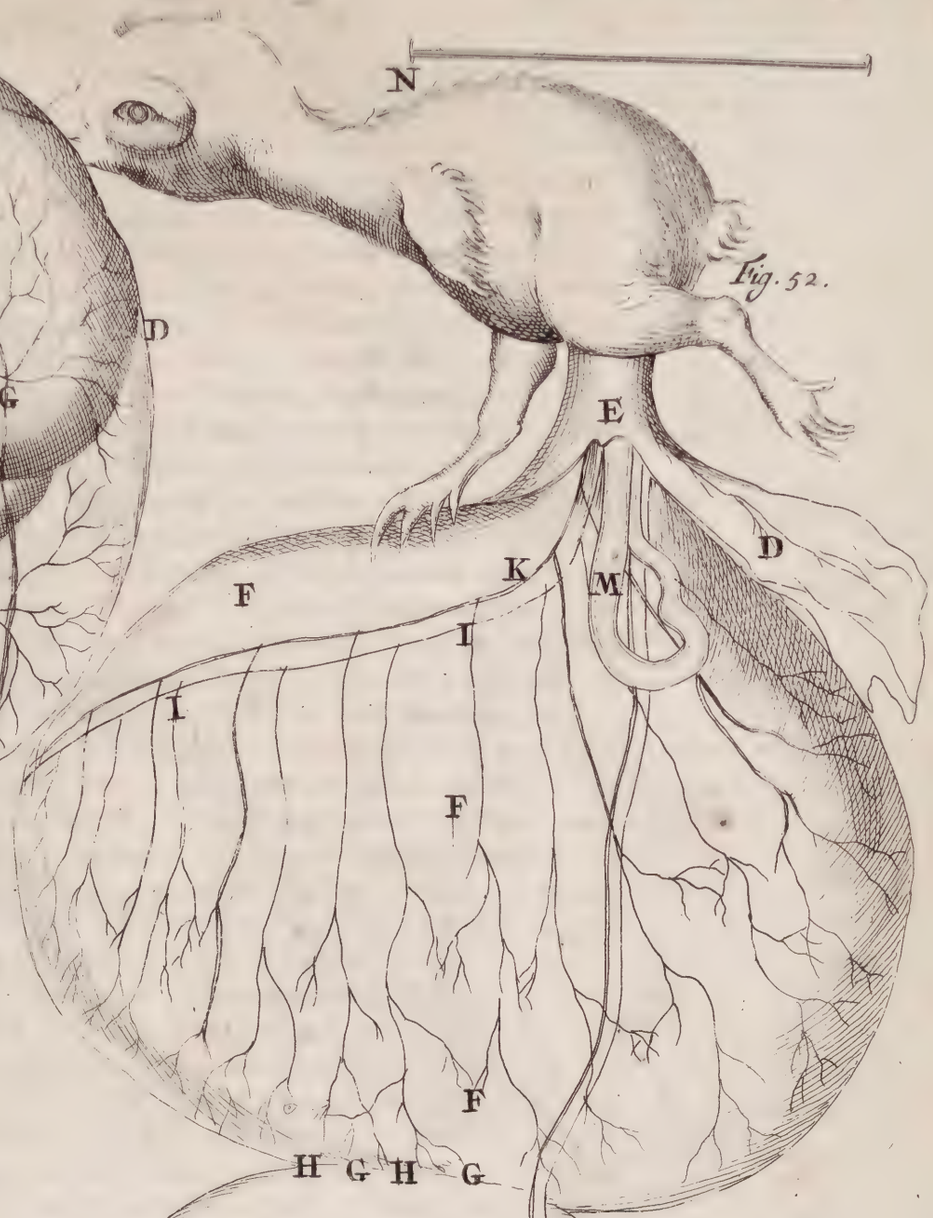


Fig. 52.

Fig. 55.

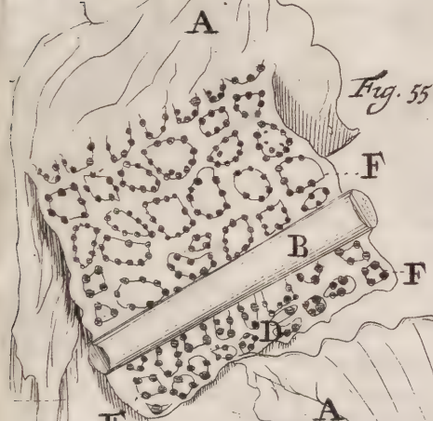
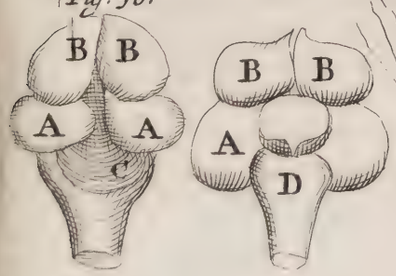


Fig. 56.



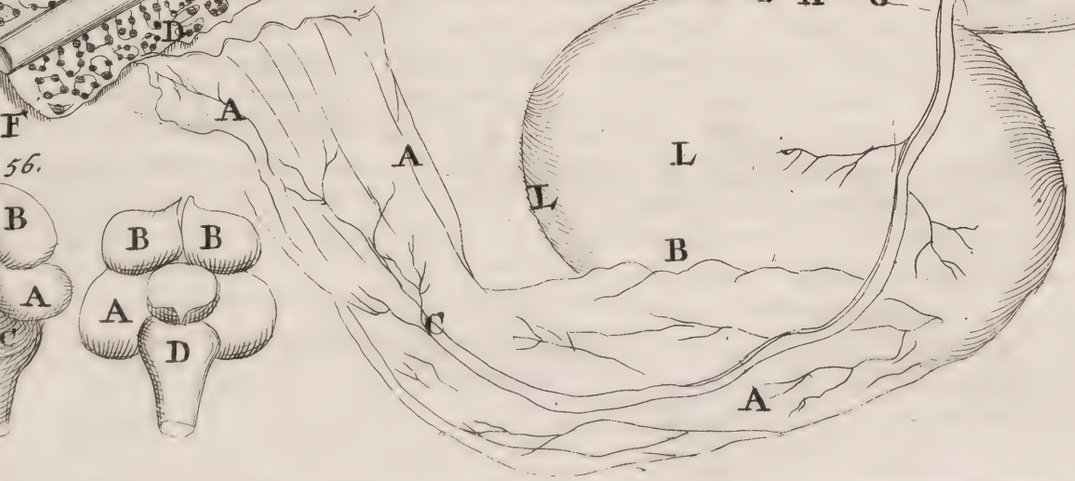
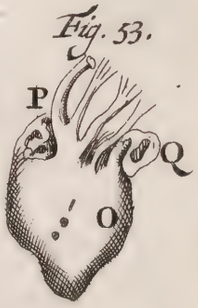


Fig. 53.



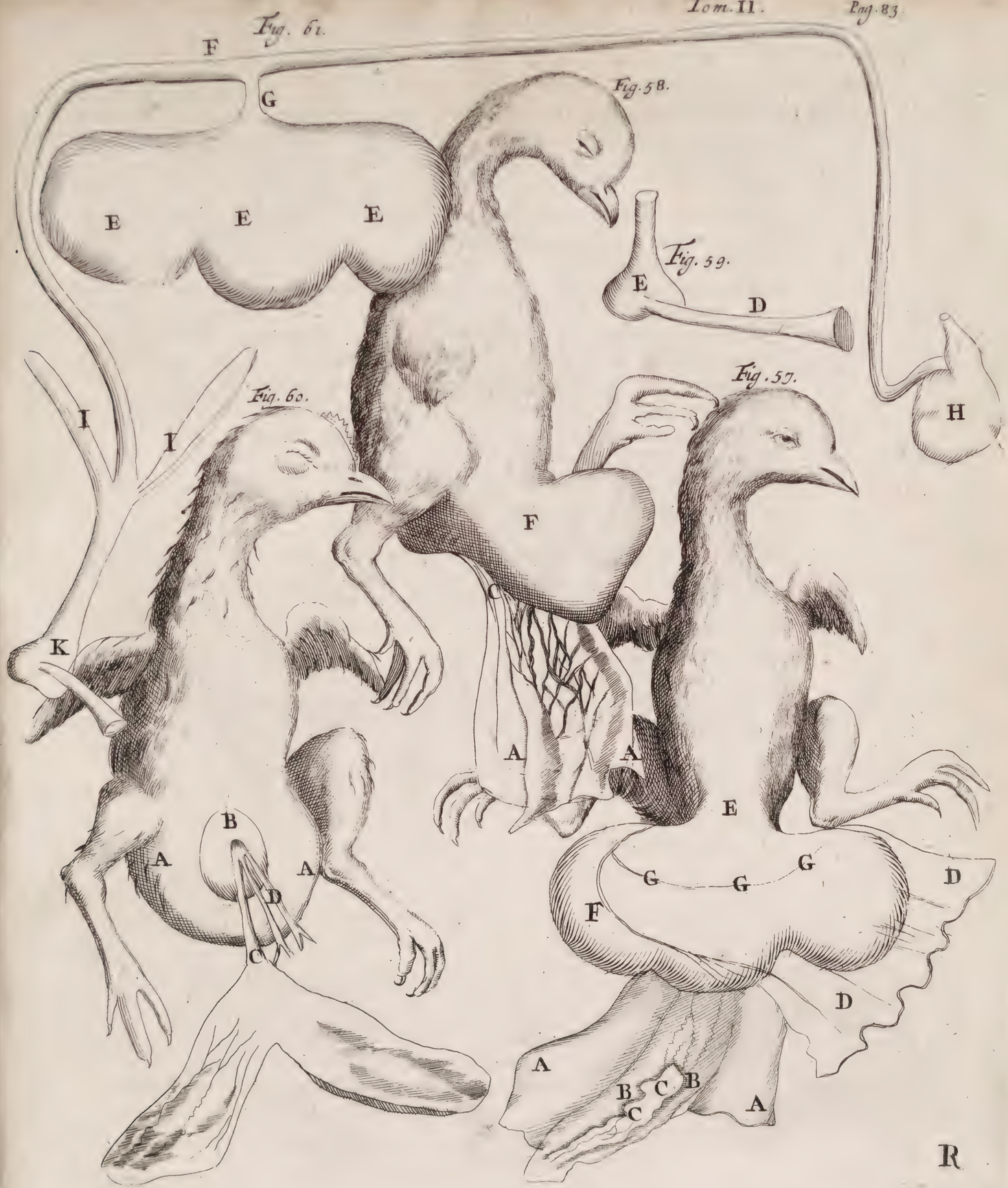


Fig. 61.
F
G
E E E
I I
K
Fig. 60.
B
A A
D
C
Fig. 58.
Fig. 59.
E
D
Fig. 57.
H
F
C
A A
E
G G G
D
F
D
A
B C B
C
A
R

pagabantur. Pulli habitus totus ferè plumis contegebatur. [illegible] dam acquisierant naturam. Interiùs pulmones subsubi; ve[illegible], la[illegible] tendens, jecori appenecbatur.

[illegible] cute, extrà pendula intestina cum sang[illegible]nebat. A vitel tunica in te[illegible] intestinum brevis meatus aper[illegible]al é penetrabat [illegible] Fig. 55. [illegible] reliquus [illegible] tuba- [illegible] & [illegible] fa[illegible] qu[illegible] [illegible] & [illegible] [illegible] [illegible]

Postremo pullis propè exitum probas, & incredibilem profectum habitem argebat cortices, quos vel per A, turgidas & tere rotundas excindebat, ut recludi pos-
B sent, tum per B observabatur ex retracto umbilico, a quo Umbilicus C ad membranea, a Vasa D prodibant. In aperto pullo vitellus E hujus magnitudinis, intestinis F brevi
F G ac ductu G continuabatur: hanc a corpore orta vena circumdabat H, veris ex ea cum carcinales appendices I promebant, & dilatata in portione circulari K cohærebant, à qua exumpebat Urachus. Vitella substantia viscosa & oleosa erat. Jecur rubicundum, cinereum præ se ferebat colorem.

Conclusio. Hæc sunt quæ Vobis imperantibus tot tam profundo naturæ mysterio adversata, à hac aggressione vos sum arrigere, quæ licet rudi manu delineata manu, incomptoque exarata stylo extent, pro integro tamen animi voto penes Vos erunt, & fortasse ut reliquorum subsequentium annorum fœtata observationibus, aut ad normam in ducendis primis pullis stamineis adumbrabunt.

Datum Bononiæ die Octob. 1672.

FINIS.

ANTONII

ANTONII FELICIS,
Abbatis Marsilii,
DE
OVIS COCHLEARUM EPISTOLA
AD
MARCELLUM MALPIGHIUM,
Med. Bononiensf
Cum
JOH. IACOBI HARDERI,
Phil & Med. Doct. P. P. Basil. Serenis.
Princip. Badensf Med. & S. R. I. Acad.
Nat. Cur Pæonis.
Epistolis aliquot,
De PARTIBUS GENITALIBUS COCHLEARUM, GENERATIONE item INSECTORUM EX OVO,
Ad præfatum Abbatem,
D. LUCAM SCHROCKIUM, Fil.
Med. Augustanum.

PRÆFATIUNCULA
TYPOGRAPHI
AD LECTOREM.

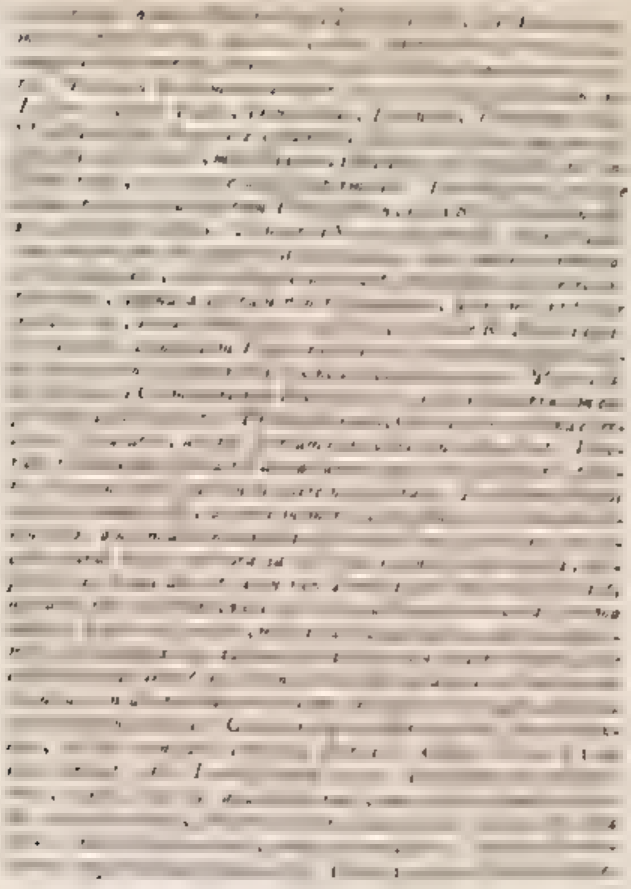
Eò tibi, Lector Benevole, nulla in re possibi: deesse[mus], consultum omnino judicavimus, sequentem nunc Tractatum, Observationibus Clarissimi Malpighi de Ovo Incubato subjungere, partim quoniam ad dictum Cerebrinum Verum sint olim transmissus, partim quoniam non adeò dissimile continet argumentum. Vale & fave.

PRÆFATIO.

Pæon Lectori Salutem!

Jam cum civious Romanis, quorum quatuor

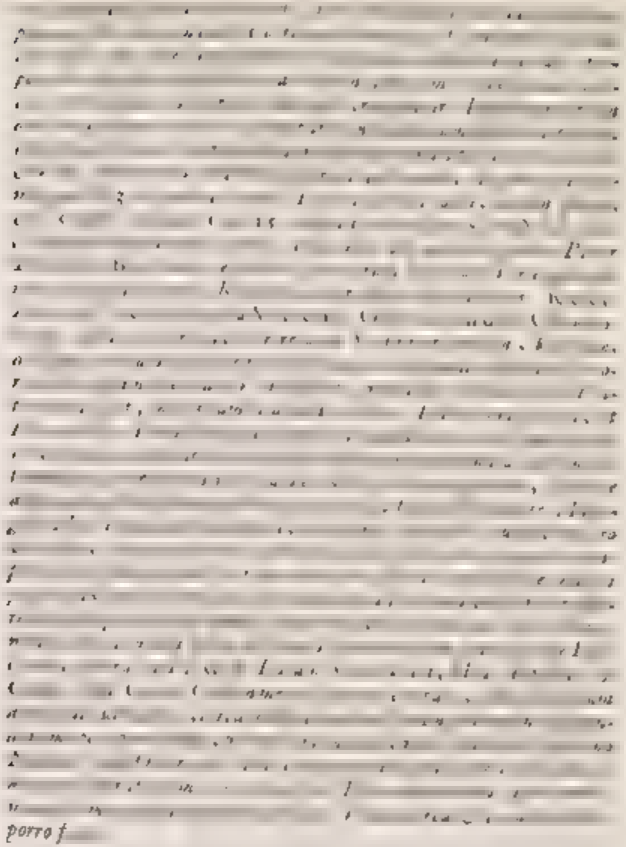
plices, minoris dignationis, equites, majoris,



Auro deterior fulvo pretiosior ære,
Tertia post illam successit ahenea proles

tio conoxtæ evaserant, l[illegible]tæ, argenti instar resplendescere cæperint,

iquitatis contradict ægre ferunt, & in Galeno



porro f

Script. Basil. d. 2. Novembr. 1683.

Vir Celeberrime !

modum electis, ut à Te directus, literis mandare necesse habuerim
[illegible] nos Amicis communicare non negexi, qui pro more affectu abre-
[illegible] quo videbis. Ac
[illegible] propositam progredior.

[illegible] Sylvax, ut nobis, Marcello Corn[illegible] quam Naturæ penetratione Anatomicum, cum ad eos tamen pro[illegible] quorum alter *generatio æquivoca*, hoc est propriè sic dicta [illegible] alter *generatio æquivoca* seu spontanea [illegible] quæ vocat. Ille [illegible] aut alios putasque Sectatores [illegible] & [illegible] Nova [illegible] propositam, ut Universalis principium [illegible] Corpus, aut ex [illegible] Nova [illegible] Naturæ, quos vocant, [illegible] Sylvax [illegible] Ac [illegible] Amicis [illegible] Corpus [illegible] Nova [illegible] Corpus [illegible] *non fit, ex materia est; ex Deo creatum fuit*, [illegible]

nu,) fortè pr-fu
Molucarum, à
nti vo.ut Hebræ
illa, quæ com. nu-
ii facu.as reducere
ctorum. Observavit id S. *eronymus* in Quæst. Hebr. ubi in Expli-
ilto altrà pedem prole
s cla.tora etiam in rem hanc doct
r alium omnium fit Ovum. *Ce*
contineat Mundus, nul *ferè genus expers eſt originis ex ovo.* Deinde ſubjungit: *Idcò*
orum Plutarchus moverat, c memorare volui. *Hippocrates*, vel quisquis
ctor Libri *de Natura Pueri*, n enarrat fœminæ inter choreas abortientis,
atque illius abortûs formam ſ ſſe ait *Ovo crudo, externâ teſtâ undique ablatâ*.
Quare & circa finem illius libr aſſerre arbitratur Naturam Oviparorum
Hippocratis dicto fidem facit,
verbis *partes ejus diſſimiles ſint, eſſe velut*
rum membrana obvolu
, ſtorum ſemen Ovo ſtorum analogum quid eſſe, &
. Unde Empedocles apud Theophraſtum: *Ova fotent exeſſis gignere*
quam-
dem & ſtructura, & partes Ovi referunt, ut Theophraſtus explicare
Naturam, quàm ſimilitudine ſtorum, non potuerit

[illegible] tumorem dedit he[illegible]
[illegible] Etiam, Puma, [illegible]
[illegible] n sequentium
[illegible] pferat, Narr[illegible]
[illegible]rum infelices apud Posteros habentur relatores, non sincera Na[illegible]
s, inexcusabilis infirmitatis in mulat[illegible] luculenter a[illegible]
, ovæ Historiæ Naturalis contexe[illegible]am Veteri[illegible]
zibus adaugendam, quibus multa, & n[illegible], eoque ad stabiliendam
Philosophiæ basin. Quod opus h[illegible]aude fusceptum videmus à So
cietate Londinensi, Academia Par[illegible]
Philosophis, in quibus Tu, Marcelle C[illegible]
mam Plantarum, quas continuo nobis tradis Obser[illegible]s,

Atque ut ad Cl. *Redum* redeamus, defe[illegible]s

I[illegible]ones, qu[illegible]
[illegible] em aggressus est, sed non omnium. Nimis enim labori
o pertexere, quo coeperat [illegible]
im mole, sed magnum h[illegible]
quod præcipuis speciebus enucleatis, &
[illegible]n esset, vel la tem campum satis
prout factum postea obse[illegible]
quæ illi obstiterant, ab alus
um, quæ a Te explicata, &
Generatio animum Insec[illegible]est, & adhuc hod[illegible]

[illegible] municibus præbent, in æstimata: hinc, inquam, est, quod multi inque e[illegible]ant Auctores, vel inciderint in suis Operibus, vel in scortivis libellis ha[illegible] eam eorum Narrationem t[illegible]derint. Inter ea, quæ curiosam attentionem præ reli[illegible]erationis eorum erat,

[illegible] alis, quæ ab *Alexandro* ob Historiam suam Natu[illegible], eo allurgere non potuit, ut observaret, Testa[illegible], [illegible]is eorum, & ubi de Purpuris, aliisque specie[illegible]

[illegible] *ipse dixit*, atque illud [illegible], radices egisse in mente pl[illegible] [illegible]tationes admittere non potuerunt. Imò crimen fuisset la[illegible] [illegible] præterea ferunt. In [illegible]ctorum originem, vel de ea loquentes in eandem cum Aristotele sententiam venisse.

[illegible] Historiam non ita pridem publicæ luci exposuit, ubi inter alia de [illegible]tatione agens, hæc scribit vernacula sermone, in Latinum translato [illegible] *Mense Majo fœturam ejiciunt Ostrea, atque a nostris Piscatoribus Spati vocatur. Id autem testiculari est, & ipsis testiculis paulo majus.* Deinde [illegible] *unt recenter edita Ova intra viginti quatuor horas testis contegi.*

[illegible] *Arenæ* [illegible], Cap. 2. [illegible] [illegible] *accrescunt, sensi*[illegible]

[illegible] *is* constructionem explicans sic loquitur. *Ova putem, [illegible]m jam tum maturuisse primæ testulæ pia, quæ eadem experientia constat, ostrea & alia testacea ex ovis, non ex putredine nasci.*

Denique [illegible]

Cervellres, alias Fistulares, alias Marinas fecit, [illegible]

[illegible]

[illegible]

ba opus hac[illegible]
finem cauda usque pergens

[illegible]

mmunas accepi[illegible]
Amicitiâ suâ i[illegible]
ducas circa Uter[illegible]
[illegible] lectu dignus de Or[illegible]
crederem, en[illegible] b Opere Roma[illegible]
cus titulus. I[illegible] *Romani Vet[illegible]*
ne Cochlearum. Opus hoc eleg[illegible]
Cochlearum majores pecies eno[illegible] pidem, hodie non solun[illegible]
[illegible] Vmnda, sed Magnar[illegible] & Splendi[illegible]
[illegible] as C[illegible]

[illegible]

mus non est, examinare varias has sentent
care [illegible] un efficiente[illegible]
[illegible] Veterem Per[illegible] &
A[illegible] as, varus Experientias conf[illegible]
[illegible] e jam receptam rejicit: Quinimo à productione Co-
[illegible]
[illegible]
subvertere admirim.

Interea vero dum dubiam ex Sentent[illegible]
bri occupo, ita mihi contigit, quod jam jam e[illegible]

Effodebantur bulbuli florem in Hortulo [illegible]
Dum terra removebatur, fæpius accidit, ut aliquot [illegible]
primo non cognoscebam, nam aeet mu[illegible]

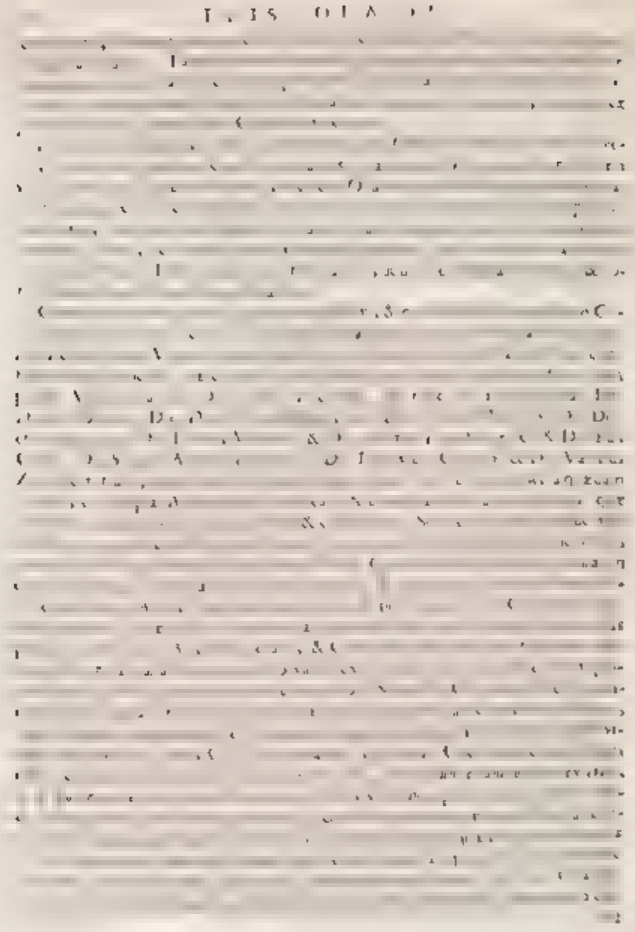


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

Fig. 11.

Fig. 12.

[illegible] tabella delineari curavi.

[illegible] tum contractâ ac corrugatâ.

Atque hæc sunt, Marcelle Celeberrime quæ circa Ova Cochlearum à me nuper [illegible] *Bonannus*, nisi fortè mei ac Amicorum oculi decepti hîc fuerint.

[illegible] *Primum* ac principium [illegible] *Secundum* [illegible] *Tertium* [illegible] *Theophrastus*, [illegible] Tom. II. N [illegible]

spontaneas generationes prorsus debemus.

ipſe etiam inde

omnes here parium.

A conſpiciuntur

ova, ex quibus progenitæ fuissent & Murices, & Purpuræ. Licet videtur id attinere alio loco, ubi de [illegible] a pretiosorum siborum testaceorum agens [illegible] cet, tempus prædic aptum esse, post dies cani[illegible] *vim ejs fortificum lucis modo effluere.*

[illegible] aliquid amplius observavit circa pro[illegible]n testaceorum ex propriotrine, nim, alterius speciei conjunctionem, tradens [illegible], XIII. descriptionem certam concharum Maris Rubri his fere verbis: *Sic a[illegible]cursu conjunguntur ut tanquam* duarum serratarum dentes *viderentur inter se co[illegible]*

[illegible] secundi fundamenti Jesuitici regredimur

[illegible] dictum sit.

[redacted] raturum ait

[redacted] habere jubet. Pruritus dictandi [redacted] lombus & axis se mutuo exactè referunt.

[redacted] tis, tamque fide dignis auctoribus institutæ ac repetitæ

[redacted] Vale. Cantabrigiæ 1 tædium Tibi atque nauseam parere. Da ve- [redacted] avocare inutilibus nugis. *Vale.*

JOH.

JOH. JACOBI HARDERI,

Philosophi & Med. Basil.

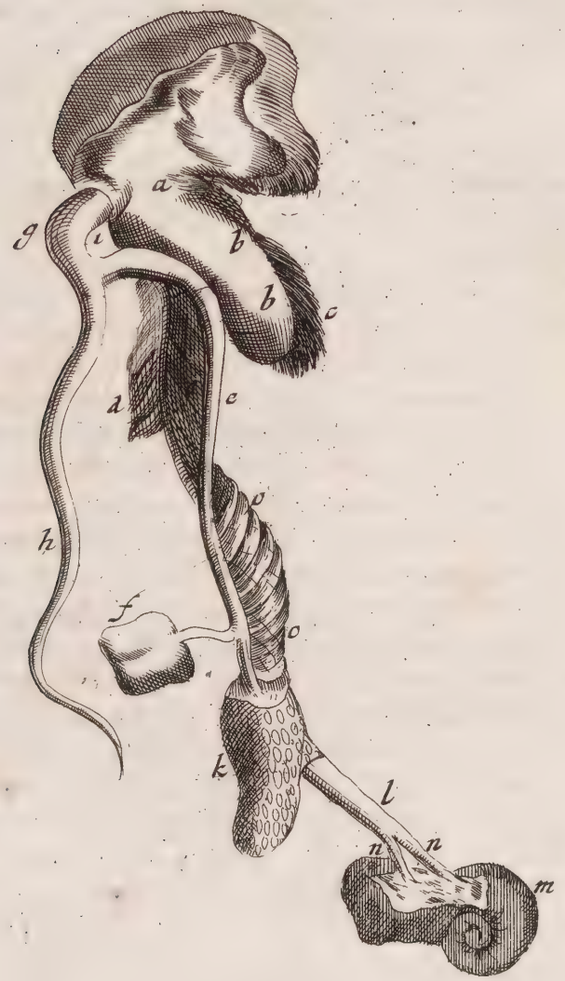
EPISTOLA

ad Reverendiss. Abbatem Marsilium Bonon.

Ova & genitalibus Cochlearum,

Ut plurimo honori duxi, quod Illustriss. Dominationis V. Frater ignotum nuper tam humaniter compellavit, benevolentiamque singularem erga conatus nostros testatus est, ita peculiari gratiæ accedebat, ubi eidem ali[illegible]. Vnde opto, Reverendiss. Dominationis V. favore & patrocinio in posterum fruebor, imprimis quoad ea rerum naturalium, ve iam præ cæteris, ipsam summopere occupatam esse prævideo. Ego equidem, si quas edidi laborum primitias, ve[illegible]o agnoscendas ergo unice confer ipsi, nec ægre feram, vel maxime aut in posterum, si corrigas, ubi deliravero, vt oculis parum accurate prospexisse videar testem, hanc, manus meas æque oculatas puraque[illegible], ac aliorum, quibus unice nullam tribuo fidem ac fidem servandæ. In *Examine Cochlearum* omnia nondum absolvi, nec illustravi, cum nec tempora id permiserint angustia, nec experimentorum quæ simul requirebantur, molitudo, unde cum ab ipso tractatu plura de hoc resecto, eaque magis illustrata, cum tempore ne prodirent, publicatus fuerit, tum in Exercitationibus nostris Anatomicis, variorum, quæ a tempore primæ editionis alterius assecutus sum, mentio, quæ si tegeret vel confudisset Reverendiss. Pater, nolui vel aliorum notam relicta vel reiecta, vel retinere improbatam, non Authentica auctoritate, sed autopsiæ & experientiæ, cuique patens adhibenda fidei ex iudicio, quam plurimis, quæ a Sagacitate Societatis nostræ invenientur, augmentis, quæ vel ante ipsum vel sine, propriis rationibus, effusum. De respiratione cerebri aqua per ductum particulæ pulmonum retrocedentis hausta, vbi ne particulæ interemptum, ut cerebro ejusdem Nobilissimus Societatis nostræ Nat. Conspect. Perhagerus detexit, cum & nervis indecentibus mortalibus, ipsi animalium expansione, quorum ope per humanas actiones peragit[illegible] & naturales communis, hic loci, etiam quæ pauca quorum primordia vocata ova & pamentoria vel magis tendinosa, [illegible] constituere videtur, generatione nova & peculiaris genitalium hujus animal[illegible]

quo ovula conficiuntur, sequestrantem ac recondentem; de
ovis. Ovula ista primùm quidem limpida apparent, ind
vitelli colorem æmulantur; in infecto quoque corpore, si d
tescunt diutius, concre-
te in horto D. Parentis mei, exstructâ hunc ob finem pe
machinâ, reperi, quo-
eum plexus lymphici, cum vesi
gnans, stillant, (vide fis pag. 15. Exam. anat. & Fig. 3. lit. a) t
oculo ovi-
10; Adeo
re-


a
b
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reptare in ea ex ovo, & quæ per cætera identica videri [illegible] ejusmodi animalculis nomen imponant, quo Magni Naturæ magistri, quique Musis ferè totaque [illegible] mihi solatio est maximo, quod Vir omni exceptione major [illegible] Reverendus Dominatio Vestra [illegible] experimentis nostris fide aperte denegandum non esse existimet, quorum [illegible] Reverendæ Paternitati Vestræ facienda [illegible] petitis, ut R. verend. Dominationis Vestræ voto affecta & patrocinio posim gaudere possim. Vale. Script. Basil. a. 11 Sept. 1687.

Ut data, quæ in Epistola hac denominantur, Cochlearum partes eo [illegible] intelligantur, conferendum puto figuram III in Examine Coch. expositam, huc [illegible] que literarium notas adjungere, è re fore judicatum fuit.

Itaque *a.* *est Cylindri finis.*
b. b. *Corpus Sacculi cuneiforme, in quo ossiculum acuminatum, cum penicillus aster recondituri*
c. d. *Plexus seu vesicula lactea.*
e *Vas lacteum cum cellulato arctissimè connexum, uterum constituens.*
f. *Glandula rubella.*
g. h. *Processus vermiformis sive Penis.*
i. *Vasculum ex cellulato ad penem tendens.*
k. *Substantia spongiosa, ex innumeris vesiculis glandulosis constata.*
l. *Vas tortuosum.*
m. *Sacculus lacteus spiralis.*
n. *Vasa ex hoc in plexus tortuosos pergentia*
o. o. o. *Vas cellulatum, ovidulum tantum amulans.*

Excellentissimo S. R. I. Acad. Nat. Cur.

CELSO

LUCÆ SCHRÖCKIO Fil.

S. P. D.

Patr.

Nuper malefermata quædam vermes quatuor, præcedente atrocissimâ cephalalgia, per nares excrevit, albicantes, oblongos, non neque hirsutos: Ex ovo verminoso intra cavitatis capacitatem eos propinquasse, sunt qui affirmant, sunt qui negant, &c. Basileæ d. 14. Febr. Anno 1682.

Cele-

Celeberrimo S. R. I. Acad. Nat. Cur.

PÆONI

JOH. JACOBO HARDERO, S.P.D.

Celsus.

Historia Tua de vermibus per nares excreris publicè legi imposterum meretur, quam forte Ephemeridibus nostris inserendam dabis. Utrum vero vermes ab intra ea variæ cavitatem ex ovo propullulent, atque discepratum quamnam ne possit esse obnoxium; sed quis dubium istud indubitatum redderet? Mirum, Tuum ea variam hæsisse, quòd non potius meliorem cerebri substantiam arroserint. Forte in spongiosa esse crimonide delituerunt Insectorum vero omnium ortum ex ovo, & quidem hic ab extra in caput quomodocunque delato, tribuere, manus vincitur adsertum, quam cui adstruendo par esse possem, &c. Augustæ Vind. Anno 1682. 19 Martii.

LUCÆ SCHRÖCKIO Fil.

JOH. JACOB HARDERUS S. P. D.

De generatione Insectorum eleganter Clariss. *Redi* ego quidem sic existimo, supposito, quòd negari atque nequeat, vermiculos ex ovo in terra generari, necessarium esse, in eorundem in corpore multa proventura, ova pro perpetuo accessare, neque eos ex quacunque putredine alia nos prodire posse autumo, nisi ovum vere insectum intus fuerit, quæ profixius in Observationibus nostris aliquando dabitur diducere, &c. Basil. d. 24. Mart. 1682

JOH. JACOBO HARDERO,

LUCAS SCHROCKIUS Fil.

S. P. D.

De generatione Insectorum Tecum libens equidem sentio, bene eandem ex ovo, cui vero ad Cl. *Redum* provocare libuerit, eundem sentientiæ Tuæ potius contrariari autumo; unde dubia quædam ex eo deprompta per otium solvere si libuerit, rem facies gratissimam. Ille etenim, licet pro tenore sanctæ generationem ex ovo à matre excluso in dubium vare videatur posita tamen, ubi de gallinarum baccarumque fagi & vermibus agit, generationem item in arboribus perpetuæ naturæ legi, non obtinere, neque à fortuito supervenientium insectorum

vivatorum

[illegible] propriam & [illegible] [illegible] [illegible]

nondum recurrendum fuisse videtur, c
communicat ossit, saltem absurdum n
tamen illud d ri posse: Multa di
ratiocinatis, siquidem
mitt, ovum vivos existentia necessa
ons ad eam potuerint, tute f
quas arcanâ naturæ diathesi pecu

contra non-

gans: Tale igitur plantarum famulitium, non nih jus manducatione placebit hoc insectorum vestigali, privata plantarum œconomia inveniatur, vitia

ovulis in Enonym, Quercûs, aliarumque plantarum [illegible] dè pomi solitis assuidè di-

[illegible] Dura [illegible] caccilia

musets ova generentur, neque præter rem esse puto, si lacé [illegible] sque à muscis [illegible]
volitantibus ova affricari dicamus, quod ipsum quidem A [illegible] hor ille primum suspicatus fuit, sed quia forte vidit, conciliari isthoc cum antece-
dem ex multa conquassatione ovula centies discumpi debe [illegible]
lunt, adque dictas aperturas in quibus haud dubie hâ lucinatu [illegible]
tios duxit: Ego vero illud ipsum improbandum non esse arbitror, cæci vermis ortio-
nem ex ovulis in lacte à muscis vel earibus depo [illegible], quandoque deducere, atque

[illegible]

sumpta, lacti pariter & caseo illam facultatem tribuerem, ut producere successu tem-
poris vermes possent, relicto enim hoc posterior [illegible], quæ in vac-
[illegible] per, & actio & expressio in

[illegible]

modo probavi, illud autem vermes in robustissimorum ertio
ex ovulis, pastis, quas comederunt, immixtis, sufficer
que, aut ex ipso corpore seminium verm
que argumentatur, dum ex Lucii ovori
lac Lucis eosdem imprægnatum p

eum generationem ex ovo, certum est, ubi ovum verum ipsum corpus fœtus angelum, & in eo interiora, ut cor, vermem proditurum, ac pullum adultum, aspectum, ubi Lucas ovum crudum fuerit hasta [illegible], ova, ut ranarum, ad vermium ordinem generatio, hujus tuæ efficaciæ argumentum, aut vero ea fuit in cocta fuerunt, quas quæso virtutem plorum fœtum habere, affirmare audeat? quibus patefiat facile, ut reor, quid ad vermium & animalium, ab ipsa in capite ad animalium generationem conferat, statuendum sit, scilicet non ex muco quopiam, sed ex ovulo convenienti, eaque per vias tubicas deportato progignatur aliud magis minusve, ad ex musearum ovulis vermes, & ex floreum ova prodeant. Hæc bono tuo Vari & de hujusce nostri regionis naturæ scrutatore dilecto tenui ansam porrige, qua eum nequeat, qua tropere flamme vi cruciam reficere & crudæ possint. Vale. Dab. Basileæ d. 24. Novembr. Anno 1682.

JOH. JACOBO HARDERO,
LUCAS SCHROCKIUS, P.
S P. D.

QUam impense doctissimus Tuus de Insectorum generatione discursus mihi placuerit, ex eo colligas velim, quod plenam mihi assensum præbere nullus dubitem, eumque propter favorem ac præsumptos labores magnam mihi debitorem profitear. Facit autem in Tua benevolentia, ne debeamus, quo anteriorem disquirendi aditum porrigit expeditum, me urget, ut circa naturam [illegible] adhuc monear, non satis circumspecte me posse, quo modo notis existos vermiculos cadaveris a muscarum ovulis vel ad eo compunctatis, vel ipsis ea rimas deponitis generari liceat dicere. Hi quidem recte ante tandem in ea ratione mihi notas abire deberent cum ova muscarum perpetua naturæ lege non nisi aliud bonum generet, veritas autem istos in musicas iterum transire ego quidem hactenus observare non potui, quid de minutissimis vermiculis hyemalibus delectis hexapodis, pedunculis, minime alatis, sensu, quæ in exteriori crusta cadaverum copiose ipsi mihi tenet oriundo, Lunburgensi dicto caseo ut pulveream fœtum [illegible] observavimus, quorum tamen [illegible] musicam quam, facta diligenter a me quæstam, nequaquam vere notare [illegible] quidem, quod dicunt, cervi, cervices, vaniæ planiæ, non nisi certas ac determinatas vermium species mihi ab ipsis ex quo inferri posset, eosdem non à fortuito [illegible] ovulis ortum ducere, cum [illegible] ex [illegible] corpore inveniri [illegible] deberet, sexus [illegible] [illegible] quæ in recto [illegible] [illegible] cos non, qui in recto nostrum [illegible]

aut supervivere [illegible], unde parentes eorum subsistere, & quomodo ovula sua liquori, in aceto longâ demum morâ abeunti [illegible] communicare potuisse, dicemus? Quæ [illegible] ovula, [illegible] ovum [illegible] ovum [illegible] ovum

Aristoteles lib. VI. Hist. Animal. cap. XV. effatus audet: Ὅσα γ' μὴ ἀποκλείει, καὶ ζῶον καὶ ἀπὸ ζῶντος, τοιαῦτα ὅσα δ' ἀποκλείει, οὐ ζῶον οὐδὲν οὐδὲ ἀπὸ ζῶντος πάλαι γὰρ ἅπαντα σαπρὰ καὶ ἀπὸ σαπροῦ γίνεται. ex his Ovidius lib. XV. Metamorph.

Quoque, delectos macerates obrue taures,
Cognatæ vsu de patris viscere pastæ
Florilegæ nascentur apes, quæ more parentum
Rura colunt, operique fauent, in quoque laborant.

Scrupuli autem quid? Exactis adhuc negotio adhuc ovve fartur, usque adeo effi-
cax non vide[illegible] Lectio nec in ovibus planis, unius alterius species va[illegible]abver-
sa fuisse, & Natalem [illegible]em Reg. & experientiam audimus, & si quæ certas ac determi-
natas vermium [illegible]ra sibi alunt, inde maximè provenire dixero, quod diversæ
species [illegible]ndem alibi [illegible]ecte magis sunt infestæ, huncque ovum vermiculum ibi
locantes deponunt. Verisimiliter tamen, quæ pag. 191. C. anis. Reg. erudicè dilucrit.
Neque absurdum est ex vermiculo quodammodo ex ovo nuscæ prodire, [illegible]ermiculum
prodire, ut quidam [illegible]ant, tum experientia docet, tum exquisitissimus Malpighius ar-
mata Perspicilla, optimus Bonanius generationem, ab accuratissimo Malpighio pro-
positam, speculatus est omnium & singularum, quibus [illegible] obnoxius est exem-
plo Cochlearum, quæ [illegible]ta [illegible]ri in cellis Sanctimoniarum usu ad retinenda dele-
ctantes deducta [illegible]nt, & parcorum, breve longæ adstruxerunt observationes, ex
quibus et alia per[illegible]ri [illegible]gere, quod tempore [illegible]ccre incubitum [illegible]ri exercuantur,
inque vermiculum, qui ex ovulo prodit, [illegible]rmem vel potius conformare
omnem ad quietis, [illegible]ri deficit, quæ ratione non [illegible] contemporis intra procedu-
dantur. Verisimile [illegible] quorum exsiccandis [illegible]ri [illegible]occasio. Licuisse
inter [illegible]numerum [illegible]ri, quibusdam [illegible]hoc tamen [illegible]operæ dedisse, ut
quod ovum vermiculo [illegible]ri [illegible]sub [illegible], hoc per rimas [illegible]
[illegible]ri, [illegible]ri [illegible]ea fit Naturæ fœcunditas & [illegible]ras, [illegible]
cuique rebus recreandæ [illegible]vacuet ac distincte animadvertat. Vale. Dab. Basil. d. 6. Julij 1683.

FINIS.

MARCELLI

MARCELLI MALPIGHII

Philosophi & Medici Bononiensis

EXERCITATIONES ANATOMICÆ

DE CEREBRO. } usque immediatè sequuntur *Caroli Fracassati*
DE LINGUA. } exercitationes circa eandem materiam.

DE EXTERNO TACTUS ORGANO.

DE CORNUUM VEGETATIONE.

DE UTERO ET VIVIPARORUM OVIS.

DE OMENTO, PINGUEDINE ET ADIPOSIS DUCTIBUS.

PRÆFATIO
AD
LECTOREM.

Quoniam Exercitationes sequentes Epistolicæ Cl Malpighii de Cerebro & Lingua olim fuerunt partim ad D^r Carolum Fracassatum partim ad D^r Joh. Alphons Borellum conscriptæ, necessarium omnino existimavimus similes ipsius Fracassati Responsorias adjungere exercitationes, quæ in Editione Londinensi deficiunt idque tanto præstamus libentius, cum dictus Fracassatus quædam a Malpighio relicta postea modeste confecerit, dum varias demonstrationes variaque ratiocinia compendio comprehendens, quid in iis subsit veritatis diligentius examinat, multa subjungit tum de motus omnis principio, soli cerebro forsan non concedendo, tum de aere in cerebrum in varios usus intromittendo & similia plura ipse in dissertationibus contemplanda. Vale Lector Benevole, nobisque fave

MARCELLI MALPIGHII
EXERCITATIO EPISTOLICA
DE
CEREBRO.

Clarissimo & Amicissimo VIRO

CAROLO FRACASSATO,

Pisis Medicinæ Professori Ordinario,

MARCELLUS MALPIGHIUS

S. P. D.

Templa olim marmoribus distincta, auro, picturis, cæterisque humani ingenii artificiis nitida, & ditata construere solebant Ægyptii; horum tamen intima, post tot impensos labores, ridiculum occupabat Numen Simia scilicet, Hircus & Cæpa; Unde cessit in adagium, Ægyptium Templum. Non abs re, ut sæpe per jocum inculcabat Andreas Matthæus [illegible] memoriæ Præceptor, antiquiores Anatomici in cerebri animalis parte, Capite scilicet, cerebrum substruxere, sensuum enim undique organis stipatum os cranio, membranis, valorum mirabili inducto plexu, nobile cerebrum dictorum Templorum Sanctum requiras, quid sub tot concamerationibus in tripode colocasium occurrat, non tam ridicula, quam obscœna reperies, de quibus cum Hofmanno memoranda putet, nates enim, penem, anum, vulvam, & testes variis finitimos locis ad mirandos, sterc, totumque negotium in lustrandis, & detegendis primis, & minutiis facessebat, neglecta interim Cerebri mole, & structura parietum structura. Ne hominem quis purchiando mutuata pecat, paucas hasce lineas, sensibus ipsis non ut totum vacantibus, velut umbratilis icunis rabiem, exaratas tibi committo, ut secundissimo ingenio tuo Palladi concinnum rectitudo templum.

vement,

lis medullæ principium, & nervorum portiones.

[illegible] quæ cortex appellatur, observant, [illegible]

[illegible] lum solum externus invo[illegible]ftum est, sed hujus portio in sangui[illegible]

[illegible] obscura.

saturatæ argilæ commixtum,

C[illegible] albam portionem divisam esse in fibrulas dep[illegible]

Fibrulæ de- albis [illegible]is corporibus, seu rotef[illegible]

[illegible]bas hasce fibras Cerebri protractas per medium
[illegible]etiam structuram in extremis ap[illegible]
[illegible]corpora, quibus ventriculorum rest[illegible]
[illegible]fluorum, seu product[illegible] [illegible]ceat lanceatas
[illegible]nus ac copiosæ p[illegible] [illegible]tur, & implantantur,
[illegible]videtur. Quæ [illegible] [illegible]ns Cere-
[illegible] [illegible]n tortuosas ca-
[illegible] [illegible]ectoribus, accedente

[illegible]ugni fibratam collectione egre[illegible]

Corticis ce- cor[illegible]

[illegible]videntiore rest[illegible] autem concameratio, seu ventriculorum rest[illegible]

[illegible]vebra cum [illegible]bus Brasl[illegible]

[illegible]cuntur

...antur autem hæ Cer... nonæ in longum, non particulæ
... ligni in fasciculum, mos iterum ... vidi, & ex pol...
... ite, ita ut laxum repræsentent rete, quod præ cæteris
... observatur. Unum observavit, quod adhuc n...
... cer[vi]cis m... r partem per transversum excurrere
... vam vela... in & tandem dela... e, binis radicibus, per ...
... product...
... numero his ... quæ Cerebro radicantur, in spinalem medul...
... rumen æ ... tæ tali ... vero spinalis ...

... rum autem exiguum, motus, & ejus nervæ sub laxiori fl...
... e est eadem numero esse spinalis medullæ, Cerebri & C...
... Unde consonum est antiquum illud, Cerebr...
esse spinalis medullæ, quod in lucem revocavit, ...

... ro per cavos nervos propagavit, magisque propugnavit ra...
tionis hic recensere supervacaneum esset: Et quoniam ob exili...
... nec sensus ipsarum attingit concavitatem, ideò solis conject...
capitulis, seu radicibus immergitur in cort... ...
vasa diramificantur, & ex aliis particulis saturatum co...
...
...

intima ſtructura in fibras derivare.

[illegible] sinus non in medul am, sed cinereitas exciatur substantia, ita ut [illegible] placentas, [illegible] Cerebri sinus [illegible] qua pertu-

I[illegible] exponit Ventriculos amplores Cerebri Pisces apertos & deductos.

A. *Fibræ albæ ventriculorum medium excurrentes*

B *Corpora oblonga, per quæ ramificatur sanguineum vas,*

C. *Albæ Cerebri fibræ sub cortice, lacerata tamen.*

D. *Vas sanguineum, quo producitur plexus choroides.*

An [illegible] Mater, confulitur, Cerebri ventriculos nullius usus gratia, sed per accidens à Natura fuisse effoimatos? Quæstio de usu ventriculorum Cerebri.

Non abhorrerem, nam ut ipse innuit, ut totum cerebrum continuum quodda[illegible], [illegible] levi excitatione [illegible] sunderes, partes interpat, vas [illegible] ex eis prominentiæ, & ita conjunctus mechanismus [illegible] quæ admit, non ramificandos à dura matre propagatos, & penetrantes Cerebrum, vasa [illegible] ejus membranis, & meandos, ut tantos Cerebri motus sustinerent, & tutior via circumfluentibus vasis pateret. Hæc [illegible] tamen necessario admittendum videtur, tam magnas Cerebri cavitates aliquo repleri corpore, & si via, quæ naturalem placuit actionem interquiritur [illegible] vitate adesset, putarem nullam quidem haberi posse beneficio inclusi aeris, non ea tamen, quæ antiquitus de Spirituum animalium generatione, & reparatione ex aere ibi [illegible] ducebantur, sed ex [illegible] vi ventriculorum partes præ motæ, unde [illegible], & [illegible] contingeret. Cerebrum tenuius, & humidius, a quibus primæ [illegible] horis rauci, & convulsio quandoque in vigilias, aeris vi ita natura Cerebrum præ externis [illegible] affici, ut in [illegible], carbonum fumo, & similibus frequenter accidat. Sed hæc, & [illegible], quæ tui ingenii perspicuitatem exigunt, inquam tibi [illegible] & ad Nervos opticos transitum facio. Cerebrum his

Cerebri cavi [illegible]

Cerebrum ortis [illegible] structura apud Anatomicos dubia reperiatur nonnulla quæ non [illegible] ex reperis recentioribus [illegible] speratum, anno collegii, cum communicanda duxi, ut tuo fœcundo ingenio longè majorem segetem Posteris largiantur.

Nervi optici

Verum [illegible] nervum opticum in singulis animalibus constare mihi persuadeo [illegible] stantia, unius scilicet membranis, ex quarum terminatione ethomiantur Cornea, & Uvea [illegible] & membrana Retinam delimente, parum autem ex [illegible] à Cerebro propagari, ita ut [illegible] eadem Cerebri medulla cum pactior, magisque densata, [illegible] sa-

Regnis & Comit. plures ex tunicis reflexis ducebantur, quæ non nisi perparvæ conjunctas arterias circumdabant. Quæ tamen ab exacta tunicarum observata, paucis accipe.

Eadem tunicarum in homine.

In Xiphia, qui ingentem oculum fortitus est, opticus nervus totus qui lem membranarum involutus, cui non pinguedo familiaris, & communis, nec ullus fibrillis vel ductibus ex illo ductus non ad sclerotidem pertingit; vel saltem ex ea ductus observatur, sed ab eis longe diversa conspicitur structura. Tunicæ enim meæ illam mirandi quidem, quam alba Cerebri substantia, non semel exercitia, in externam veluti placentam, vel chalazis crassiorem lentem pia mater contenta, & in plicas, latebras & cuniculos ducta, quæ totam quadoque nervi circumferentiam recta processu excurrunt, quandoque tortuosos in gyros flectuntur, ut in exacta icone considere poteris.

Nervus Opticus Xiphiæ Piscis.

A. *Membrana investiens nervum opticum.*

B. *Membrana tenuissima investiens nervi vermiculares propagines vasis sanguiferis referta.*

C. *Duplicatura substantiæ optici per transversum sectæ.*

D. *Ejusdem per longum continuatæ.*

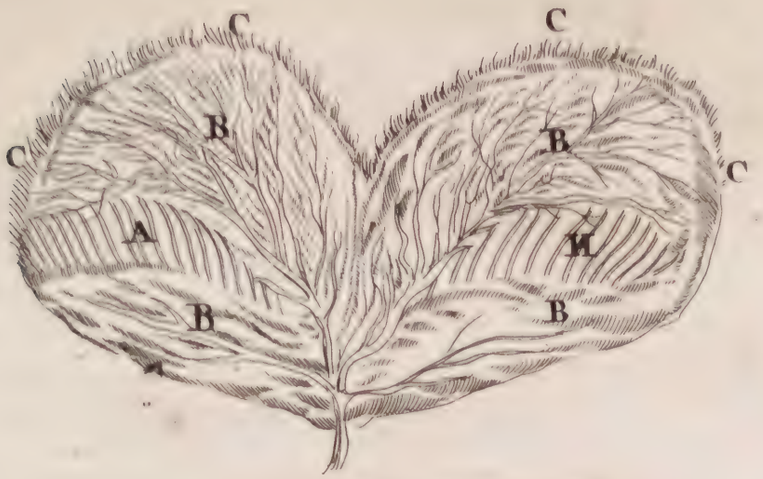
E. *Foramina, & vasa, quibus sectus nervus extenditur, quasi in amplam membranam.*

Corpus pyramidale ex nervo oriundum.

Sed ante aures plicarum circumvolutiones intercedentem obscurum mirare, per quam decurrunt tria vasa arteriosa cum sua tunica, ac quod propagines emittant, ita ut non leve tunicarum hæc investitura. Investitur tota hæc mole duarum, a qua optici figura, & robur concepit, & venit in fabricam nervi sequentis. Unde hæc per longum secetur, & varietatum rationes. Quæ nervum ibidem ab ortu ad insertionem secant, totum opticum nervum in triplicis membranæ processu dividunt, & maxis crassioribus per duarum vasculis irrigationis excendrur, ex quibus in globum oculi partes extrema ciliorum ramos remittunt, unde tot circumvolutiones ad nervum ramorum non remorandam, sed potius Cerebri excitationem, & quidam ciere. Hæc in Xiphia saltem expertus sum, in Tyro pauca cognovi, ut gratiosus pudibus, quæ mihi fecit de occurrentia quæ hoc in organo subsint perpetuum probabiliter censeo.

Anastomoses arteriosæ.

Hæc vel ductus ad lanuginosis amabiles consimile me reperisse ferebam, at in Piscibus, Caprea, Sue, &c. opticus nervus, ut sæpe & sæpe observavi, crebris per latera, non magna foramina, seu cavernulas pervius, ad quas arteriolæ venulæ, ac nervulæ pauculæ hinc inde ramificantur, irrigationi nervorum, vel excretioni pituitæ pugnant, & conferunt. Hinc ortum ab exterioribus nervum Cerebri substantiam, propria membrana, a pia, arteriosa mem-


C
C
C
B
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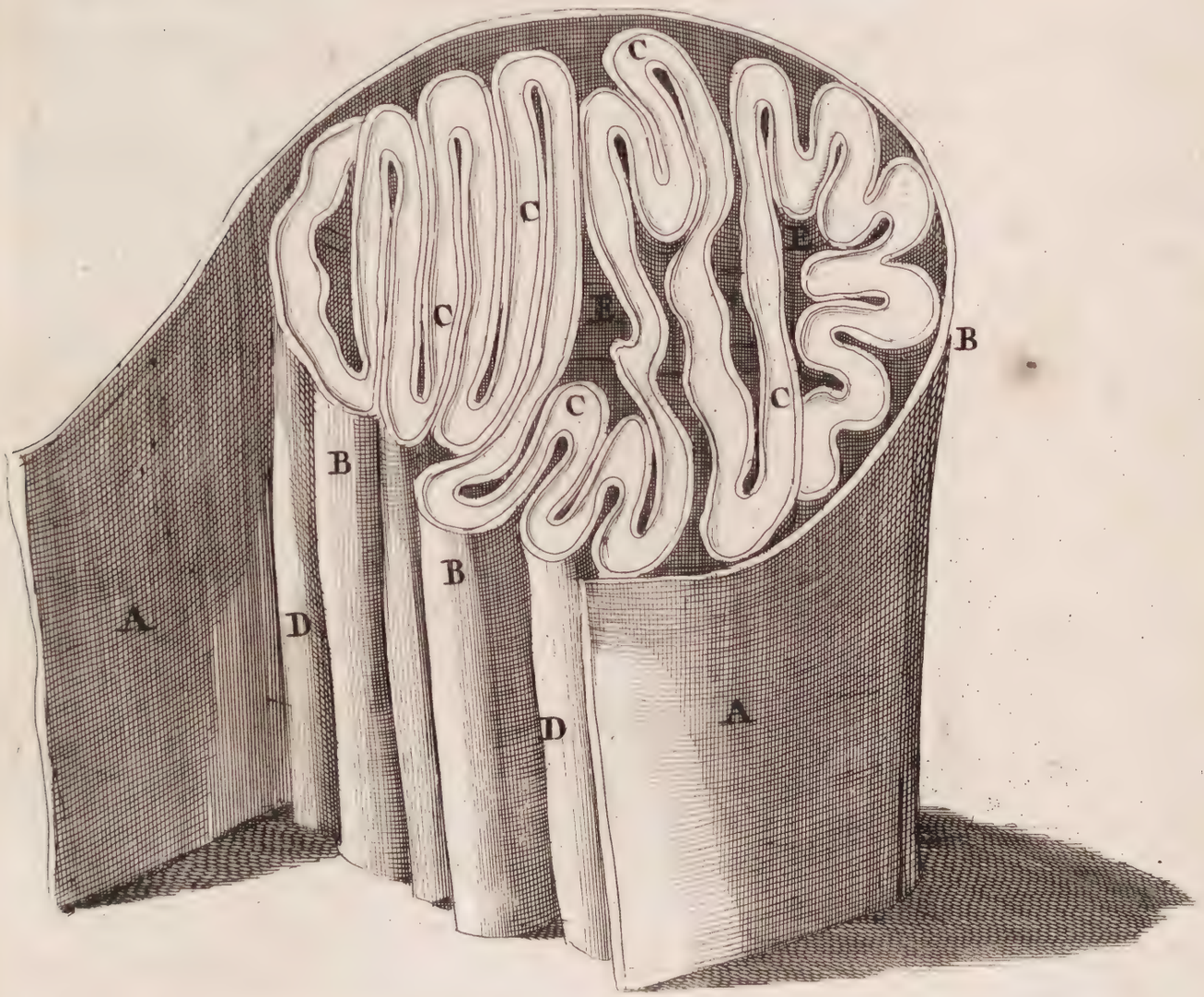
C
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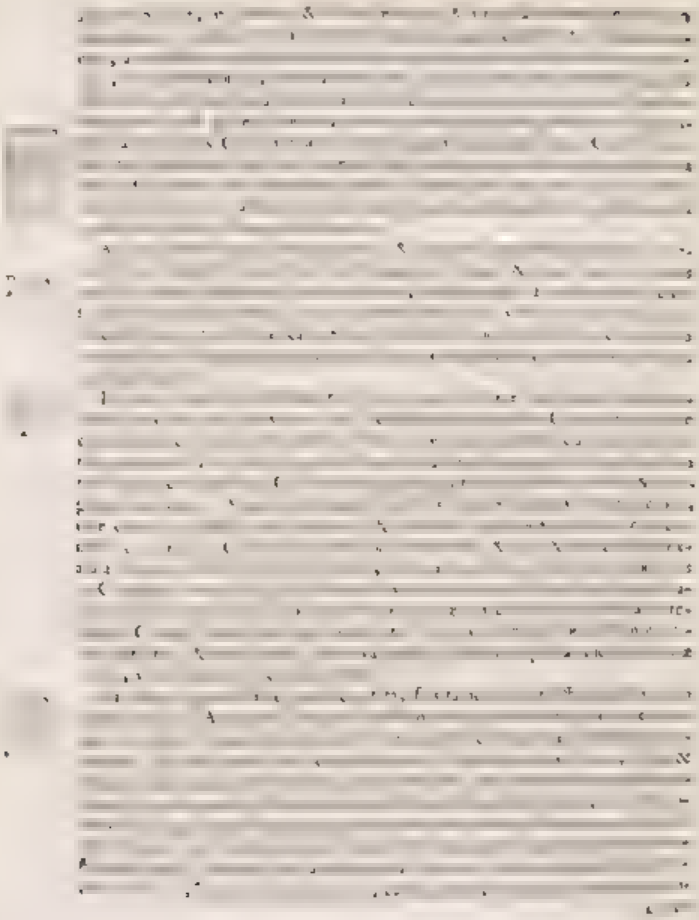
A

sunt. Nectuntur ad invicem, tum valis, tum forte etiam meliorum[illegible] mutuam invicem sibi con[illegible] colligantur veluti in fasciculo

Non parum miratus sum hanc naturæ diversam op[illegible]

[illegible]

[illegible]



[illegible] gitur extrema optici latitudo, ut accenti[illegible] medicinarum, & librarum, in qua hæ[illegible] sint ita fiat connexio, &
Examen sicet ex funiculis à medulla substantiæ [illegible] na jungantur, nondum efficietur, & ego hunc, [illegible] glandulosæ naturæ nerveas fibras intrinsecum [illegible] tes medullæ unici filamenti vicem gererent, paucas & nunc[illegible]

[illegible] hujusmodi fibræ, ut [illegible] nervi exeant one in Retinam rectu[illegible] v[illegible] n hu[illegible] tarum prodeu[illegible] ur, unde à diversis partibus objecti eodem tempore tangi pos[illegible] t, & consequenter unicam, & communem promere motionem.

[illegible] nus dubitandum venit de [illegible] aera motione in ventriculis Cerebri excitata; [illegible] puri, ut optime observavit in M[illegible]chanicis Doctus *Cornelius*, non ad[illegible] [illegible] s[illegible] ur tione exprimit ingeniosissimus Carteſius, sed ad latioris [illegible] [illegible] e cura terminatur, nec probabile est [illegible] [illegible] [illegible]

occurrit, oculorum humores determinatam exigere molem, ut debita intercedat distantia, unde si aquosa nimis retinerent excrementa, ex irregulari horum generatione confusa corporis forma ex tali utero conflaretur animal. Accedat, vetrem quidem humorem, cum aliquo ope in aqueum tumescere, si quis fuerit aqueus humor, eo reparari posse, Crystallinum vero, cum sensu pilem calore concretionem, pati ut, nisi per aquoso humore augeri, & nutriri posse.

Conclusio. Exigua haec de tam arduis excipe, & licet aliqua non dissimilia de Cerebri substantia apud Cartesianos Scholam jam prolata videas, sic astamen ea per hypothesin, sola ratione, non vero sensuum ministerio ad exponenda phænomena, ut opinor, usurpata laudatus *Bartholinus*, prolata fuisse. Majora autem acutissimi ingenii tui, & cultiora promere non graveris, & præclarissimum, nostrique amantissimum Borellum consalutato. Vale Messanæ.

Tridui Kal. Novemb. 1664.

CAROLI

CAROLI FRACASSATI

Phil & Med Bonon. ac Pisis Anatom.

DISSERTATIO

Epistolica Responsoria

DE CEREBRO,

Ad Clarissimum, ac Experientissimum Virum,
Messanæ Primarium Medicinæ
Professorem,

D. MARCELLUM MALPIGHIUM

Bononiensem.

DE CEREBRO.

...entus tua ferant, Sintor veritatis inex... excipit inventum; & cum insueveris naturæ le... detegendis, Myda verus Sapie... as admittus, pergis velle omnium conten... ...ta emittat. tenes enim quantum bo... ...ut, & *Terentius* in *A...*,

Quin tu, dum, ipsus, jam, si aliquid adporiet novi,
Aliquid moneat, ut illa, quæ te scire, hæc...
Et qua tibi putaris prima, ut expetenda repudies.

...ut, quia ex *Theocrito*, Ὅρα μὴ χοῖς πόνος πόνος, ...ἐγὼ δ' ἐς ... Habet hoc de... ...s, velut avarus fœnerator, parum lætetur, sed novo semper... ...um præfatio, qua tapetas loquetur, ...nendaret labores, quando jubeat semper (ut ita loquar) ex... ...deprehendi... ...ol facientes: nam cum... ...debuerunt: etenim... ...pagationes & promulsides... ...catum combibunt. Rem majo... ...tam, qui... inventorum fabrefactus, & non... ...compositionem...

ar, hinc litterariæ vſucapiones, quibus ſæpè non dominis

num, ut mereant ſocios habere, vel toto diuiſos orbe Britan

(veluti

relatu parvum Cerebri imitamen) ideo Cr

atoris, qui Cerebri diaphanas, ut ipse
atus est *Hetmontius*)

o inflexo transitu

tus exeat: tandem *Prece. mmeo* accedis, qui Cerebri interiora consu
lus prae

rum parum auctori illius, presso nomine tribuens, fere tanti m

aquationis inertiae, ipse

oc obductas involucro velut quasdam radices) deprehe

ur *fibrulae* transversim in corpore calloso exaratae, quae in

inque affulo, circa albas il

quia tamen pari

emisse, nisi ad hypothesim

tum motu iceret, nihil ma

quam viam excursu suo ins ent, modo aberrantes, modo in fa

n collectas prosequutus, in f cubas, & aliqua fi

I

Methodus Willisii in Cerebr.

in condis, asserv antur, appe[illegible] concitatum motum spirituum versus systema nervorum, sensus demum & motus in n[illegible]lata ob congata fieri aiunt; & tandem, ut ho-

lum

[illegible] naturalium paradigmata [illegible] epta ferunt. Iſtæ ſunt per ynopſin enunciatæ [illegible] Cerebro, ſpirituum via, ſi [illegible], [illegible] lectiſſimæ opiniones, q[illegible] in, præciſo Cerebelli ſyſtemate, præ[illegible] fiet ap[illegible] parvula [illegible] e, & præcipuè, ſi adhæreris, eadem mihi poſſe edere [illegible] analiculos, [illegible]

[illegible] ipſo capite, ac ingenium tuum teſtatum.

[illegible] par enim [illegible], quod ad [illegible]

[illegible] us, nec spontaneorum, [illegible] us intercostalis in præcordia, ac abdomine in- [illegible] , hinc [illegible] ecta præcordia, [illegible]

[illegible] , par quintum, quod totam occupat faciem, mandibulis [illegible] , ac fatis, naturali [illegible] ftu mis ut communitorum animal: sexta [illegible] & adducenti musculorum oculi prospicit, pa- [illegible] indigitabit: par septimum, quod auditorium est, [illegible] dornorem, qui tres abit in [illegible] turalium, ad quos non vocatur Cerebri consensum ἐνδιαμέσως [illegible] dit musculos suos, ut sono [illegible] secundos varius emen- [illegible] palpebras [illegible]

[illegible] subiere, [illegible] cui fua [illegible] [illegible] fum [illegible]

[illegible] octavum, quod huc pro vago audit, suum Cerebello ap- probare exor[illegible] [illegible] [illegible] [

processus, cum iis à medulla Cerebelli exortantur, & simul ad præcedi

glandulæ par

, is intus ultra pergas, præter

pariter, & ipsæ cavæ, hinc oblongata pi

moles, quandam veluti glandulam, totam c

facessens ad spinam e rene. Cerebellum pa

il aliud esse puto postremas duas prot

ne pervium in alveolum quarti ventriculi.

[illegible] ibus esse medullam [illegible]

[illegible]lle comparare furculo, qui amputatus a stipite, ac extrema sui [illegible]

[illegible]ineri, cui ipsum *Willis* præfecerat, parùm aptum judicavimus. [illegible]um hanc hypothesim perstringere, demus D. *Willis* verum esse, [illegible]

[illegible] spirituum ad ipsum commeatus, [illegible]

[illegible]vit, ut motum partium, qui, cum spiritu tur[illegible] impellente, San[illegible] impar alendo, nervorum Syzy[illegible]ad partium contentiones noscendas, quæ ignoro, [illegible]

[illegible]undinne est, cum infoss[illegible]

[illegible] Ne aliquid objicias, torpent[illegible]na, ac effœta reddantur, nec ignem

modocunque tribuerit [illegible] codus. Sed jam ad te redeo tua de Cerebro in cocumen-

[illegible] serum concrescibile ad [illegible]ra deduci,

[illegible] medo la[illegible]

[illegible] mutuiter præbes quærendi, an omnis Apoplexia inde

[illegible] Apoplexia constanter affirmant, [illegible] si esset institutum naturæ, ut cloacas re[illegible]

[illegible] orum pariter placuis spretis, qui alibi collecta, sed nullo indicio [illegible]

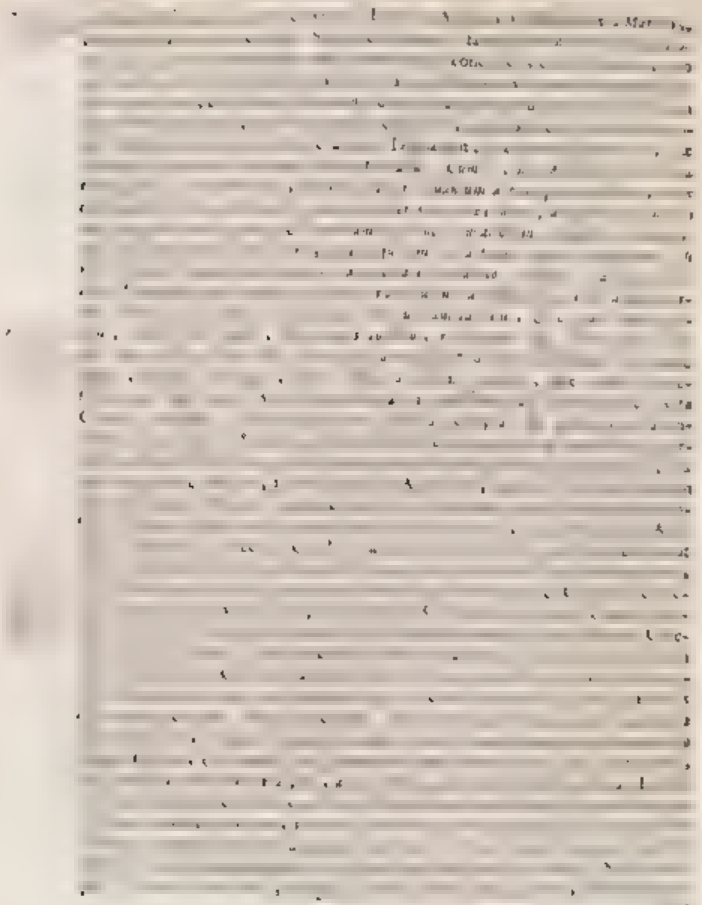
[illegible] *cum agitur sanguis, motu privatus, spiritumque non modò intercipiunt motui,*

[illegible] [illegible]ne corporis, in Apoplexia vero intercipi eas, quæ sunt in collo & pe-

[illegible] [illegible] [illegible] *Hippo-*

[illegible]

Hoc tamen consectarium ad sanguinis stationem veteres latu[illegible]
serum, nempe sanguinis in [illegible]
sanguinis fatibus vasa, ventriculos,
liquium spatia supererisset, & penitùs [illegible]
[illegible] tamen, sed syncope
hæc affectio nuncupanda esset, ut qua nullius re[illegible] ocus, maximè cum const

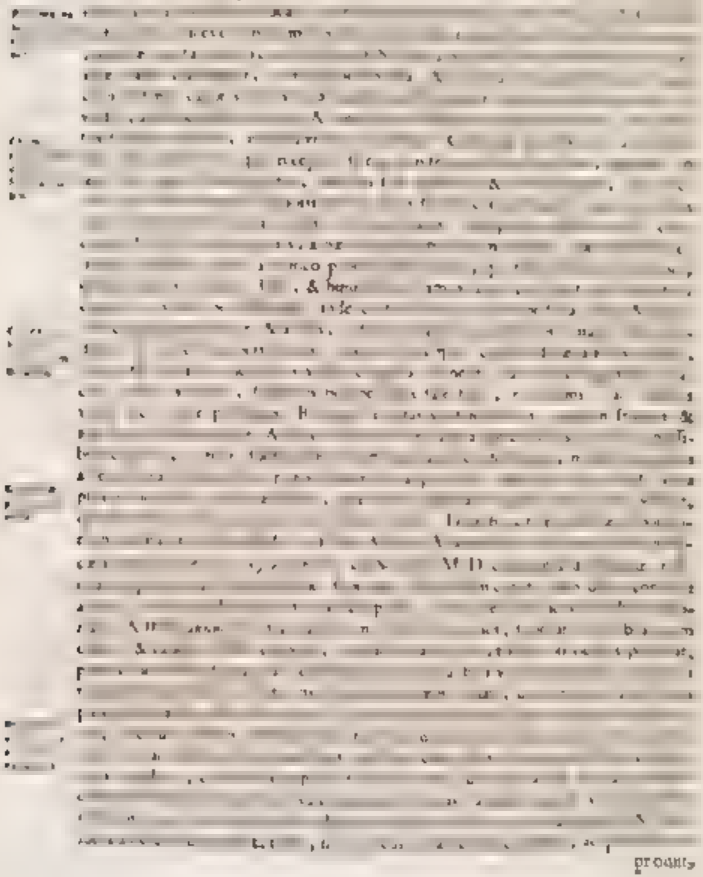


[illegible]

[illegible]n ambitu amplexaretur, sed [illegible]
enim medios ventriculos obtinet, & [illegible] tumore ab area [illegible]
[illegible] taveram totus a subdita medulla separationem [illegible]

[illegible]
[illegible]
[illegible]

quæ tenellam illam substantiam detineant, u succi nervei, & ferè



promit,

dūc sed seorsum illud par Cerebro factum, velut medulla Cerebri visebatur. Fol
adeo inspicatur in pulmones, ut faucia
cluatur, secundum *Sylvium*, dextr-

ad cruciem rapiebatur. Cognito substantiæ Ce-

est, quod in
per loco occurrant. Apud antiquiores varie p

mia non ἀέρος fertur aër, ac si mora illa, & viarum deberet attenuari, foramine pervio sunt processus mamillares, adeò ut

colorum dicatam, ut possit (cum *Severino* loquar) arctereinare coll
nde ad
triculum progressus, spinali medullæ transquam pu
best sensibiliter cavum non videri, nam (præterquam quod

Objectio

gerat, nec
possit quo extremo motum, totum eodem momento mover
ethereum est, quæ) æthereæ particulis, corpus cerebri, ac nervorum, ità ut modicam sensuum
& objecta ità ejus causas sensationum, unde e-
diathesis ea
fun-

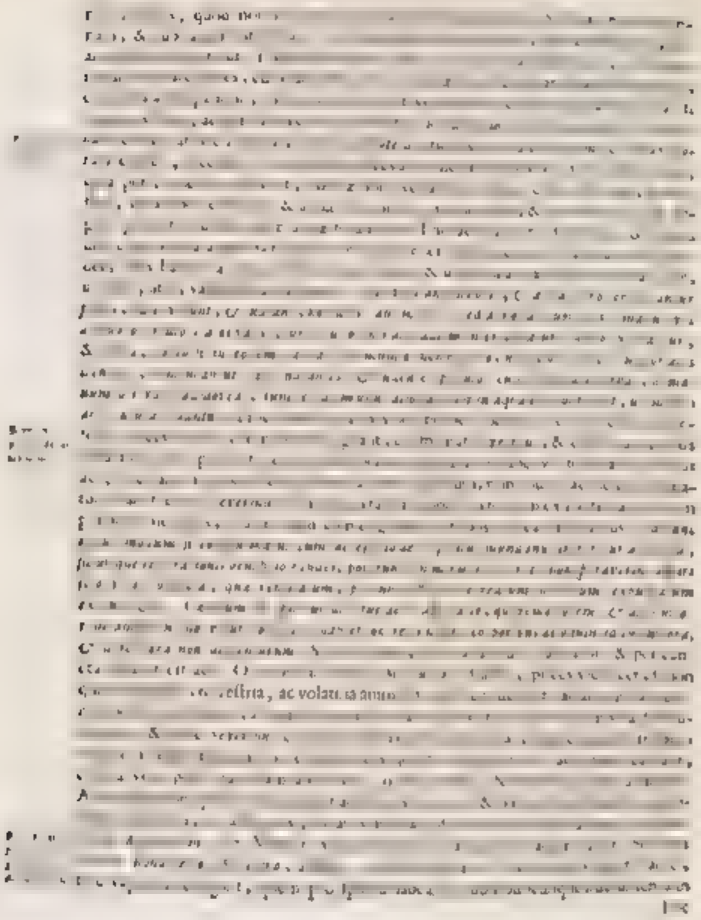
[illegible] Sed vix crediderim, aerem solum diffi[illegible]ba curam vulnera
[illegible]eprehenderim, plurimos luc[illegible]alica affectos eorum a c[illegible]
cerebrum viderentur, superfluos diu fuisse, praeci[illegible]

Septuagesimo rarò solvendo vulnera, ne peregrinus aer in Cerebro excepta
ipsum tesseram Cereb[illegible]na turbaret. Q[illegible]
quae in Cerebro ab aere [illegible]

Liberalitate [illegible] maximum munus in Cerebro aerem praestare, si [illegible]
na es, processus mamillares, nervos exactos ipsum ad interior[illegible]
Cerebri ducamus. Sed aliquis Galenicis imbutus doctri[illegible], & nostram
[illegible] quantumvis feram, laudabit, pot[illegible]rum, nos relabi in sententi[illegible]
[illegible]
veo mixtus, sub tantalitet mutatus existimetur, ultro b[illegible]
amplectar, qui fatum, aerem nullo mixtionis vinculo demen, nec

lium, & explosar [illegible] alium [illegible]
cabulis tantum [illegible]
Λογομαχία obiectar; hoc [illegible] experti [illegible]
apud *Boyle* de vi aeris elastica, ac [illegible] in liquidis latere, nil interesse, si ipsum contendamus nimirum per pulmones sangui [illegible] misceri, licet hoc valde dubium, quando hoc [illegible]
[illegible]
spirationem ad [illegible] cessantem, *Praxis* [illegible]
[illegible]
[illegible]
[illegible] *Boyle* [illegible]
An sit in aqua de cognat [illegible]
Aër a fila [illegible]
[illegible]
[illegible]
[

tur, aerem respiratum apprime necessarium, non qua qualitates



quoniam sequestro organo sepa[illegible]rem hanc moliri poterimus? tanta egemus vi,

ad amussim, unque, c[illegible]

[illegible]onibus ho-

[illegible]s extre-

[illegible], quàm pulmonum donat, sic hypothesin integram assecutus,

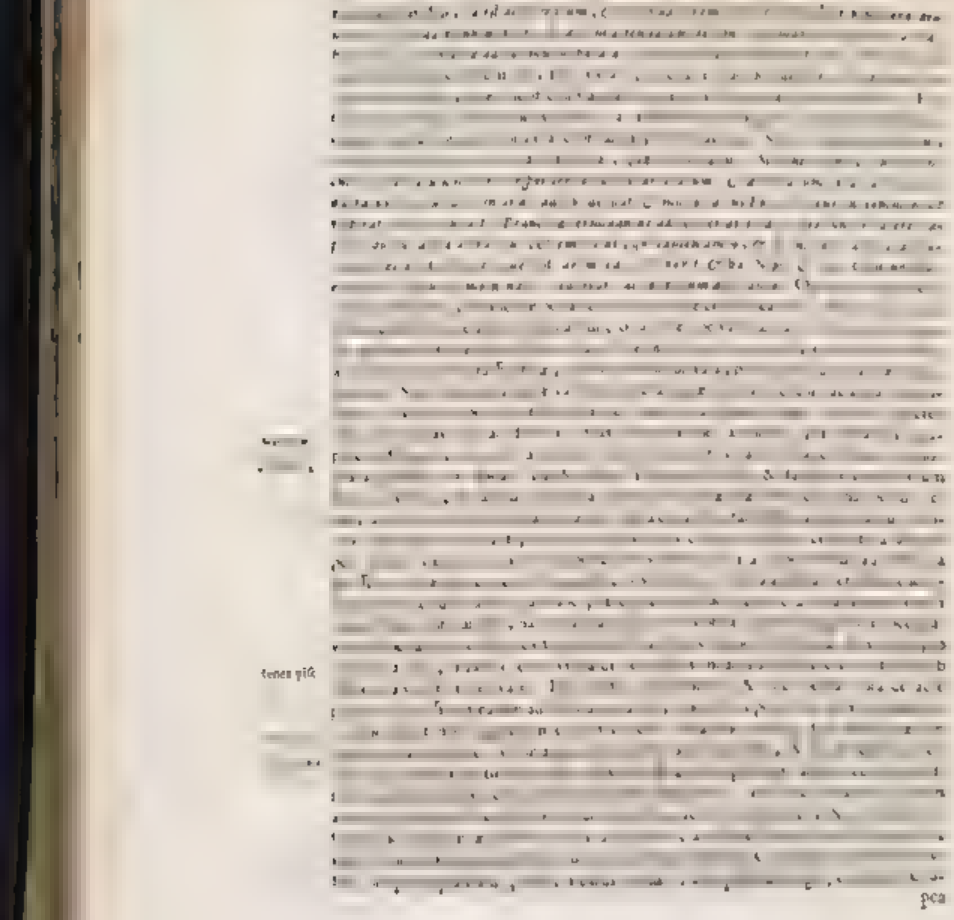
[illegible]

[illegible]nis firmum cuniculum; ac faciculis pariter ne-

[illegible]

prodi[illegible]it, quæ dicunt, voluit rem tantò tanto, tantum perficere, non oculis usurpa-

[illegible]



pea

re innumera penè inter se nulla cæca prodiscine meatum alvee, quia ad orbidam aereum ve[illegible]ditur. In grandiosis pecudibus hæc ve[illegible]est, parvorum tamen totum abdomen [illegible]cav tate locus innumera implere qu[illegible]

urabi aer continetur, hunc bullæ ad sup[illegible]iora forte emer-

Bullarum indicia caperis Muſtela natantem.

[illegible], & [illegible]co gaudent ſenſu, an quia a

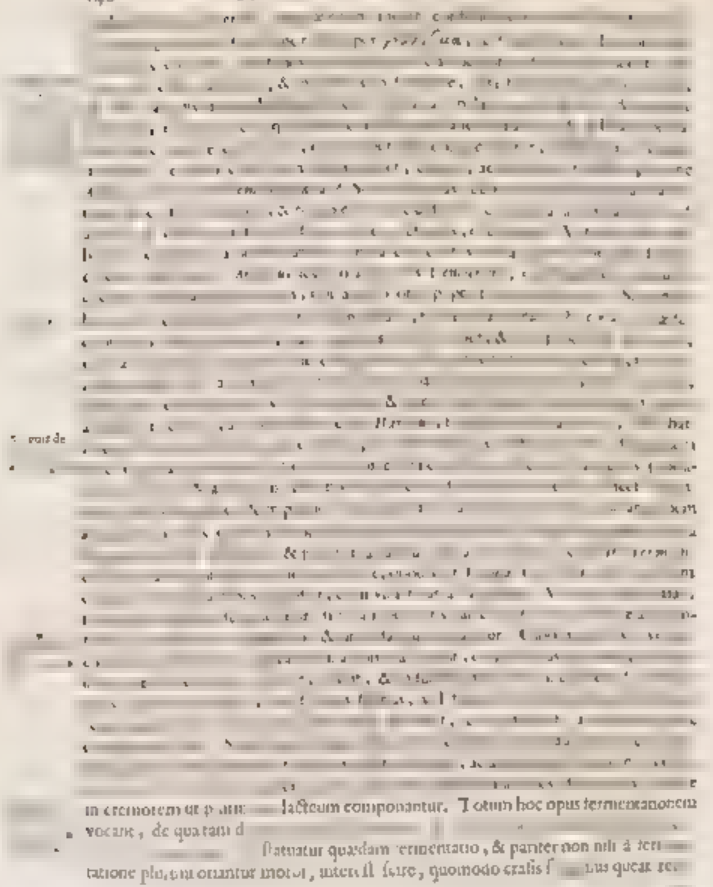
ex eo, quod in aqua parte figatur nervus fi[illegible] la pars
nervum referendus est motus nam si articula[illegible]dus moveret
ante nervos, accedente nervo non nisi movebitur, sc[illegible] quid aliud ab ij
cor nancisci, diceret *Helmontius*, huc totam omn[illegible], scilicet motum naturalem
[illegible]er moventur, ita tamen ut motus forte naturales non
[illegible]r à nervis, sc[illegible] proj[illegible]
[illegible]spirationem. Hæc res de motibus naturalibus tanta involvitur M
[illegible] paradoxa, ac videatur sensibus veritas adumbrari. Sed jam [illegible]
a difficillima hac cæcutarum motuum naturalium inv[illegible]ne, quæ sola lo
tum posceret sermonem, ad alia devolvamur, quæ m
huc accedent: nam cum hucusque seu nutrim naturam, [illegible] cerebro exaltato-
[illegible] paratione in pericran. innat, non absre erit observatu

Bis non amplius secretum, quod pubici juris facere [illegible] ad studiosorum aditatem, invideamus purpureum hunc latucem parumper c[illegible]lere, cum ipsi illas morbo- serum debeatur, & interfit specu[illegible], quæ mutuos torent, quando in his so[illegible]um

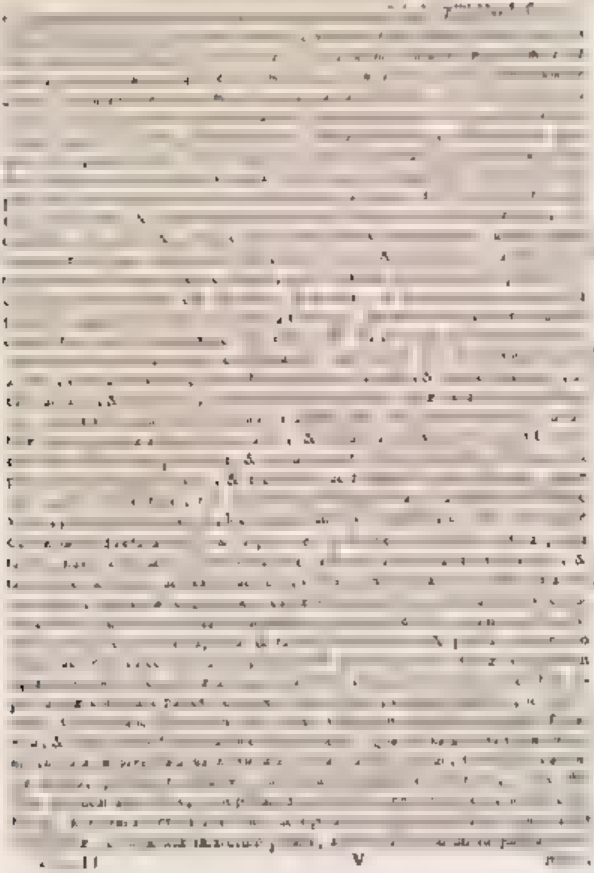
cogitatam, medicinam nempe, infusoriam, [illegible]
in quem hanc infusionem media[illegible]
[illegible]

pauci defunguntur: si actionem compositam, cum [illegible]hilosopho dicamus, [illegible]b uno
[illegible]m organo; non compositam tamen, verùm simplicem actionem
hepate statuit *Galenus* de usu partium, & tamen alio sang
get, qui postea non nisi cum venoso debeat misce; sed mera [illegible]
Hoffmanno adempta cordi nutritione dare ili vitam. Qui porrò sapte[illegible]

[illegible]ne, scholas subque deque miscunt, alii enim pro homogeneitate [illegible]
[illegible]lem) circumferunt, ut probent, diversas substantias
[illegible]cuat. auctoris sanis sufflaminandi essent, *ad populum*, [illegible]
[illegible]enim eos, qui proprietatem sermonis amant, debere in his terminis ac
[illegible]n sanguinem vocare, qui cæsus est, [illegible]adem, qui frigidus, & sic de
[illegible]nem bilosum; pituitosum,



in cremorem ut plurimum lacteum componantur. Totum hoc opus fermentationem vocant, de qua tam d
flatuatur quædam fermentatio, & partem non nihil à fermentatione pluvium oriantur motus, interim sane, quomodo cralis fluidus quæ fer



[illegible]

[illegible]

[illegible]

[illegible] ſcentem, ac otioſam teſtatur vim ſpiritus

[illegible] ſcetur, ſiſtam cordis, ſecundum [illegible] nuam multorum, non his accenſeo, quippè qui nullam à corde ferm[illegible] onem eſſe (quod neceſſe eſt ut *Carteſius* deſtertat) exiſtimem; *Chyli* deindè magſu parte abit in ſanguinem, ſed non alto, niſi medio

Purpureus

ditur, videlicet flagmati bilioso in hepate, ac vi & fentur, ac melius exaltetur, nec hoc contenta, quæ

Aridæ pestilentes

tuem præstare aggressa, separata ad cor im-

miscet, & novo dirat fermento, tanta est, ut vitalia pro

tinet

eum ſpiritus retinent, ſeparantur, & ad ima deſcendunt præcipita- ne, vel depura-

ne ceruel cur geſtus ſiquis ne deputetur

ena dilovens aliquod incerctur : propter-

vapor

trioli, qui aqua vitrioli eſt, ità extabicum cogere ſan

tur, vel exeant tales in variis præparatione nat

des exaltari. Curationis hujus tale est con

us adhibeantur, nec virtus morbi

retur, ac frangatur. Restamen hæc multo

menta, ex quibus non tantum curationes morborum, sed Th

de Chirurgia inusitata novitatis am, ac adoream præpuit, non tamen me valde anxium habet hæc occupatio; c vit, qui debebat. Ex

quædam; valdè scilicet carbari cum vino sacco pancreatico suspendi, & ita medicamenta ab isto succo vitæ humores catharticè per venas statuebat. Hanc medicinam ante in Anglia celebratam, scribit secum suus *Caspar Schottus* hoc se medium non facere ad purgationes intestinum, sed alio ligatum, ac, cognitâ sanguinis febrè resolvendo decocto totus cardo esse in delegenda materia, quæ retineat, aut evacuatur, ac debeat esse naturæ acriæ an opiatæ, quod dicat opium esse magnum diaphoretici cum, an sudoriferæ, vel cum miasmate pravo homogeneæ, quod *Willisius* ostendere conatur, dicens, acrimonia debere esse cum miasmate pravo; Harmonica propter sortem sylvestrem, ac volatilia propterea salem armoniacum, spiritum vini camphoratum, ac alia confortativum cum mixtione medicamentum parat infinitum. Agnoscit demum & ipse acida volatilia non contrimere, & tartari vitriolata medicina, nullo tamen præeunte experimento a quo ipse orsus erat, ut tenebras novam medicinam non verbis suaderem maximam esse.

Conclusio. Hæc sunt, quæ circa hoc aliquo modo spectare, potius ne è memoria mea excidèrent, quam quod digna forent, ut responsoriæ epistolæ attexerentur. Ignoscas aberrationi meæ, & des amico addictissimo minus ægre tulisse verbosam prolixitatem, si potes. Thrasones tuos, quæso, spernas, nam, ut cum *Flacco* canam,

Crescit occulto velut arbor ævo Fama Marcelli.

laudaveris, vel invita dicacitate, in quam *Gorgias Charephonti*, οἶδα γὰρ ἐν ᾗ γῇ τοὺς ῥαθυμους ὀλίγου τοὺς σπουδαίους φυει. Vale.

MAR-

MARCELLI MALPIGHII EXERCITATIO EPISTOLICA DE LINGUA

MARCELLI MALPIGHII
EXERCITATIO EPISTOLICA
DE
LINGUA.

Præclarissimo & Eruditissimo VIRO

JO. ALPHONSO BORELLIO,

Pisis Matheseos Professori Celeberrimo,

MARCELLUS MALPIGHIUS, S. P. D.

NEscio an improba sors, vel potius occultæ cuidam necessitati referendum, Linguam qua Artis, & Naturæ panduntur arcana ingenia & obscura sui compositione latitare: De hac enim divinus Velanius habet: *Quamquidem vero universam linguæ fabricam ex cavernosa pulpa, quæ partium constructione nisi mantis, ut verum fatear, cognitam necessario, admodum ac ferre quadam complexi sumus.* Hoc nihilominus, apud Anatomicos varia, & opposita in hac pertractanda occurrant placita, dum aliqui linguam carnem, molem laxam, spongiosam, flatuosam, nonnulli glandulosam naturam ei attribuunt, aliique ex cellulis, & membranulosa compositam corpore, & tandem certa quadam occulta rem habitantium, quæ eam in eo quo corpore habent species, reddere videantur. Non immorabor ea ratione deprehendantur Anatomici omnes linguam papillis gustus partienda plerique eam linguæ parenchymatis nervos credidere, nervea propagmis aliquatenus, & circumvolventis membranæ, & vagatum est novissime communitas ad linguæ radicem allocatas gustus prunarum organum sibi vindicare. Omitto, quæ de linguæ motione, diversorum linguam novem aut plurimorum, & eiusdem usibus coptove partibus controversiæ agitentur, dum in earum discussione si quid minimum firmabile fuerit, non aliquando quis contingere videat. Non nulla itaque ad unguem ipsius fabricæ rationem observavi, quæ non ad usum ora, phonophonicum instrumento essent, communicanda duxi. Ut postea hæc igitur pertinaciam, quæ in babula lingua, exteriaque conformationis elevatis conservavi, hæc habeas in extensa linguæ parte, papillosæ lingue re[illegible]

parte

glutinosa subilantia excitatis, circa latera concava, obsc[illegible] portiones e diuersi
rectulare vel cribrosa substa[illegible]

[illegible]

jam exaratos sinus, & connubia radicibus occurrunt; circa has

[illegible] adhæret quibusdam nervets propa-

[illegible] rius iconibus apparet.

[illegible] desideratissimo de animalium motu potiora philosopharis.

[illegible] sam, quam ingentem rerum gustabit in discretionem genset; unde

...nireo de ... odul. placuum, ſtatuentis primarium ... num glandulam ad ... guſtus ſedes ... ſo primario
linguæ radicem locatam, qua ... ſio obſervante, licet gemmas videatur, unica tamen,
& continua exiſtit, quod qu... n ea limat ratione, omnes ſemicet ejus partes, in

& cum non acceſcat natura alium partem inter illam, cujus munus
organum ſentiendi interponere, ideo videtur hanc, ut p...
. Ex his autem, quæ obſervavi, conſtat, glandul...

... obſervatum principio Oc...
... ſcet ad baſin facta conj...
... ſe humo...
... tationi glandulæ propa...
... n quidem eſt, circa has...

... linguæ corporis portio diſperſa obſervatur, ſub h...
nervaceum, & pa... ...ſam conſ...
tur, figuram, natu... ...et am curatiſ...
... tremo admiſta... ...jus prop... ...is ambiguum eſſet, an hunc, ve...
...us com... ...o corpori glandulofo communicaretur
Poſſimo.

Pro tenui tunica linguam inveſtiente, tanqua... prima guſtus ſede, mul...

permittere ſapidis corporibus; quare cu...

...do quodam n...

...ſo tractu, ut ab a...

... putavat, &

hus fieri ſenſum guſtus probabile eſt

ſcrupulus, cæteris etiam papillis guſtus p[illegible]ſſionem fortè convenire pc

laxatis nervis, unde ſubitum robur.

[illegible] præsertim [illegible], cum pressione medii, aliquid adhæret, & aura pulsa [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

EXPLICATIO.

Figuræ Figuræ.

Lingua integra in quinque partes secanda.

Secundæ Figuræ.

1, 2, 3, 4, 5. *Portiones a vaginæ natura, quarum ope cohærent se tunicæ & earum fibræ tendinosæ & variæ processus intertexunt.*

1. *Extremus apex linguæ per transversum sectus.*

A. *Fibræ carneæ cæteris solidiores per longum ductæ, totum linguæ ambitum investientes quibus retrahitur lingua.*

B. *Carneæ fibræ per transversum ductæ, linguæ latitudinem imminentes.*

C. *Fibræ carneæ perpendiculares crassitiem contrahentes.*

D. *Membrana adhuc investiens linguam.*

E. *Fibræ carneæ linguæ dorsum, & latera trahentes.*

F. *Fibræ rectæ extra linguam in musculos externos protractæ.*

G. *Fibræ angulares linguæ intro trahentes.*

H. *Fibræ acuminatum dorsum deprimentes.*

I. *Nervea portio in papillas desinens.*

K. *Fibræ rectæ basim linguæ componentes, inter quas exiguæ glandulæ, & pinguedo locantur.*

M. *Basis linguæ.*

N. *Progressus linguæ.*

Tertiæ Figuræ.

1. *Basis secta per transversum.*

2. *Cornua cum binis externorum involucris.*

3. *Fasciculum corporis papillaris cum nervea propagine tribusque papillarum speciebus.*

CAROLI

Fig 1

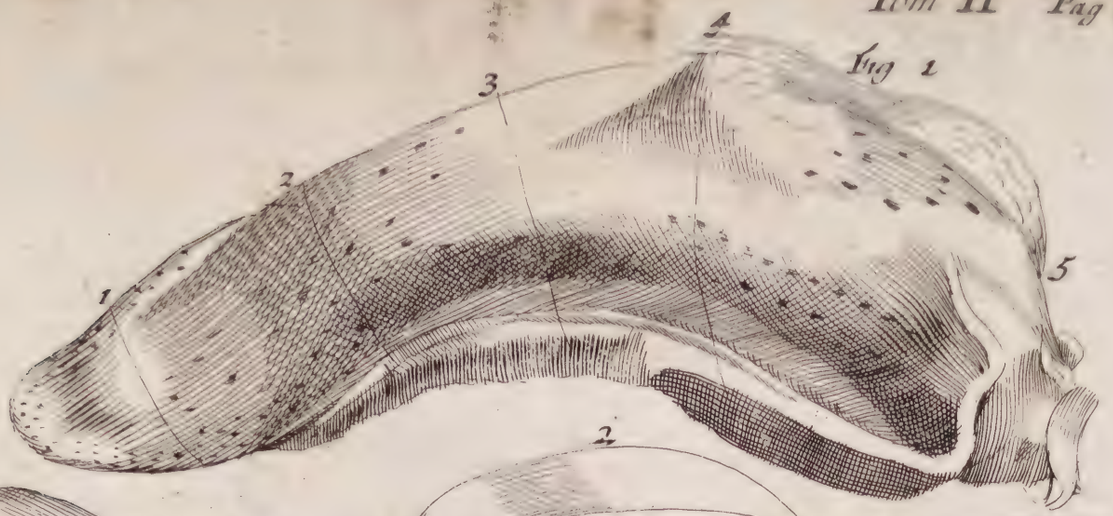
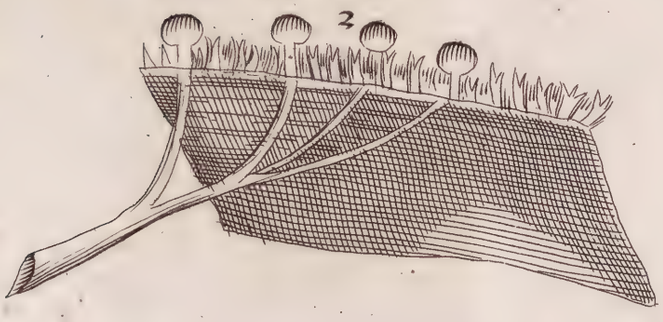


Fig 2



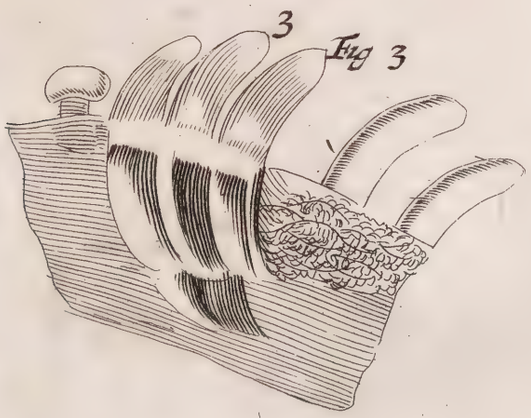


Fig 3

CAROLI FRACASSATI
Philosophi & Medici Bononiensis
Pisis Anatomici

EXERCITATIO EPISTOLICA DE LINGUA

AD

D JO ALPHONSUM BORELLIUM

Famigeratissimum Matheseos Pisis Professorem.

Cleobulus Lindius

inventum novum de l , quo ipse Anare-
prod
& profecto verum dadagis *semper tibi pende-*
nao, & expendendo quantum
ter tot concrepantis linguas

vs ex *Sophocle*, quorum nempè, *lingua vanos sermones jacula-*
ac vult mortuam linguam nova eloqui, quæ veteres latuere
quantumvis A co *(Alphonse)* ἅπαξ ingeniosum, & non
aliorum commentum tributus; qua in naturæ finum descendit, mirari non d
ne hoc novum, quod ipli exacta debebit A
rebat; ita vocitatione capta sæpe

philosophi, quod agendis gratus ars destinat hecatomben.

Dividit in geminos concordia fata duorum,
Saturniumque gravem nostro Jove frangimus unâ,
Nescio quid certe est, quod me ibi temperat astrum.

...ervatum: fœtat & lingua fertur, ut est dialectus, seu ... lo ut *Juvenalis* ait:

Terra malos homines nunc educat, atque nefandos

...rec mortuus, quam tertica pars

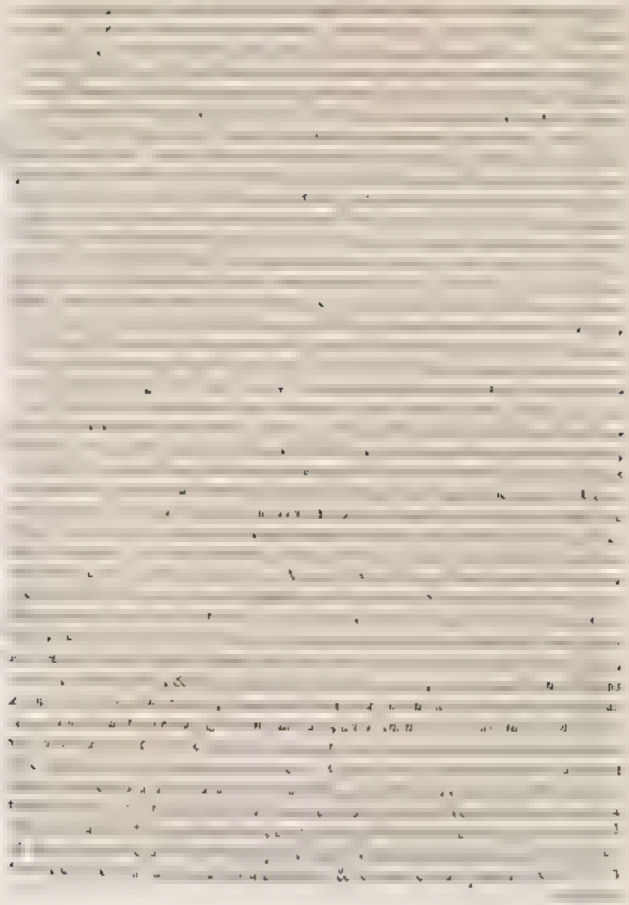
...us in animantibus duplex, ac bifida, in Piscibus con...

...Tunica tegitur, bubula tamen, cui exte...

...o quoque epidermida reor, sed ... apud omnes anatomicos edoctum ... Cla... ...rum sensu linguam amovet; seu fibræ, si parata altera ... ...res, ac ad linguæ tactiguum cocuntes, illam musculorum diver... ...gem affirmant, quod licet non omnino, certe & ipse ... ...magna sui parte verum musculum appellavit, & propte... ...las non retulit quantumvis *Aranius* eo nomine ... ...æ nullum musculum componant, (motum tamen tam... diver... ...et, hanc fibram necessariam immutationem à musc... ...dependentem determinasset, sed ne recoquam crambe ... ...fuæ culmo nuæ nerveo, multiplici ex... ...in determinare sensitiva ne sit, an motoria, cum stupiditas, ac ... continuata terè ramis pecent dilemmen, & fortasis etiam muneris ..., quod mihi arridet, nec experientia reclamat, cùm nullus nervus motui ... ...æ (musculorum ejus operationem præ... ...remenio Reipubl. ...

[illegible]

Lin-



Linguam ... antem, ex *Charleton*, & vim illam sapiendi ... quam partes tenuiores ... ex *Gassendi* sententia, quatenus mixti, ...

... consectarie succulis, & vivacentibus nervis vocamus, nutrimenti proclivem ... fieri, scilicet sub specie vaporis, inquit *Hoffmannus*, hoc ... fuerint, etiam permista circa rugosam superficiem ... parte alimentorum ... lum prop ... Sed jam ad papillas, ... ultus, ac sapores explor ... qui ... quæ ... multiplex alimenti interceperat incessus, ... deamus. Et quia hi penetrant ... hinc ut contemplat. fieri ... sapor, unde ... ... hoc ... ... papillam; quia convexa ... superficie curvatur, ... ebrando tenet, ideo movendis ... idem erit sapor, quia multiplex, nec idem tactus, fiat ... salium, cum papillulis variam syllasim prosequi ... ... est omnino transmittendum *ἐκκεκαυμένον*. Summo scilicet pede, percurrendam hanc *Philosophiæ* solo lonitur ad rubustiora enarrante, hominum vestigia, ubi, tarditate hac augescat exercitatione ad ... sensus omnes redegero. Primas sibi vindicat ... mum motusque locales, nempe *τὴν πρώτην φυσικὴν* doctrina, admittentibus ... nem vitus est traxit *Democritus*. quamvis sola tantum objecti facie tamen ... experimento velit ... vinum abjolvere, ac proinde ... licet admirandum saudeat a ... logia oculi cubicum ad oculum ... patuit & gene- ... ... ab quod spatium temp ... ... sus enim fere tangit ... ... exactam ... tam ... tud ... ... rhombos, circuli per E ... ipses repræsentat ... ... nes, vel à sola admissa a ... lumine diffor ... ... obiect ... ... ones hos non sicu propa ...

dum

[illegible] rarum ab ejuratis qualitatibus abludant, hanc sinistrorsum obli[illegible]

Hucusque Era
a Apes constru
Tinum
ram eorum le um ter-
xequer
os cubos co gla iam , & cō
a ven lam a b
s , & ultimi cubuli prodi-
x ejusdem spe-
qua possent repugnare,
&
a natura, i parum
in comparato-
unem : observante Clar.
is obtus
, cum
arum glandularum docet S
dedit, quæ ferun
fl
fa febrianta,
eſſes eſſe vata
ens prodit, quod ipſe, ſe lens in Apri vegra
ext, ſed aventum hoc me n a
ac hoc recidit ad Furet.
aram, la a e præcipue, ſum

[illegible]

ut motus tardius, gravitas circumposita, ac media, plus occurla[illegible]

[illegible] loacha, diversaq[illegible] innumeris ill[illegible], ieis enim quo[illegible] conjectatur, quomodo ille[illegible] erat linguor, ubi[illegible] eam prius sal non solvatur, quod demonstrat posse[illegible] fieri, quod fa[illegible]ta temperqu[illegible]

[illegible] versas esse salium figuras, & exigua aquæ im[illegible] ab aqua sapiens quisque docto, sed jam ad circulatorum præstig[illegible] [illegible] e sua[illegible] quos nulla vis ignis solvat clarissimo argumento, esse quasdam quibus entia differant, quæ alias convenirent, qu[illegible] es forte in cinetibus suis, sicet passi fint igne, alibi in aqua [illegible] redeunt figuram. Ipsa vegetabilia & mordicus se tuen videbis [illegible] sale illo fixo nduletur? quantumvis *Rolfinchius*, [illegible]prout con[illegible] *erpentibus petrefactis*, hæc tanquam non entia chymica h[illegible] [illegible] nibus naturam odere existimandum esset, vel credendum in[illegible] [illegible] o agere, cur sali, fixæ nempè corporum [illegible] bi nus in mixto [illegible] am? hoc est, ut pinora præstet, & sapores ind[illegible] nim cit, nec c[illegible]us sua plantarum spectra profitant, [illegible]

granulas excrescentes ta. lutos alcendit orin; hoc & Hipp

γλωσσα , κ. οξυ , κ. στροφευ , κ. παλαδαρόν , κ. αλλα μυρια παντοίας δ.

1 Fossas numerum determinatum pro indeterminato sumit,

lubricet separant, ac

aliquibus fortuitis ,

s est v sum. Sed à microcosmo

deductis salsum mare ac ingenito sale tinctum, quem aqua, dum cor

boc cont , vel quod mat

el quia deus nera salis. Causis siccescunt lac

ous cum Aristotele compra

is in Oceano Hispanico

Oceano Æthiopico ad Gi

fieri possit, varia in mari salis suppetere promp

crarum circ con

æstenus in mari persecum sanus, propius ad oculos

occurrit, qui in tostitem, & cædium, quod satis est

Parei nasci salis montes recensen tinus in Cappadocia, I

maximum, aut medius, ut in Pl[illegible]is in Cypro in
Judea Asphaltites, cujus sal Sod[illegible] fontes Germaniæ fatis in-
signes, unde sua nomina [sed[illegible]] sua sunt mutuata,

sed ex urinis Camelorum conflatum, unde Armeni
[illegible]chitur; & tamen ab ea regione exulat Camel
[illegible] autem ergo cum (ipso relicto) *Serapione*, cui non adstipulato
[illegible]os dartiss[illegible]us Armoniacum fien, sub

[illegible]no, quod ex Imperato Σοφος βοτρυανος ostendebat, qui fasce-
[illegible]d Vesuvii juvisendas ita un
[illegible]erat, fenior ille Indoso[illegible]n à flammivomo scaturatore ac
cum crepidis superstites redut, unde enim cum plur[illegible]ma digna obser
[illegible]let, inter alia saleni hujusmodi nativum prot
[illegible], cùm de re ipsa multorum fides nutare [illegible]ad experi
[illegible]um fuit revocatus, & planè omnibus, quæ exig[illegible]ut fecit fatis: nam

ardant de sub[illegible]
rina planta, quam pa[illegible]
dimus, hic tamen sal, quo ut[illegible]
tis, ac ex lapi[illegible]

[illegible]ect

ret viderint pro sale petræ accepi, est flos salsu[illegible]ieus ex spelunearum parietum, a[illegible]

[illegible]rotum aquis cuiusmodi sale fœtis alluat, dicerimen tamen aliqu[illegible]
ter Nitrum, & salem petræ, cum illum sarcoph[illegible]

[illegible]ra obe[illegible] vulnera, u[illegible]s sanguine lintea a[illegible]
[illegible]robabile censet vel ple[illegible] quod vadimon[illegible]on in maximam
Hue alii pertinent fales, ut bitumi[illegible]icus, flos salis [illegible]
[illegible]us quibusdam, ut Agricolanus, qui ab
[illegible]accedamus, *Sodensem*, *Tragasum*, & plures fales artifi-
[illegible]vel parum ab al is

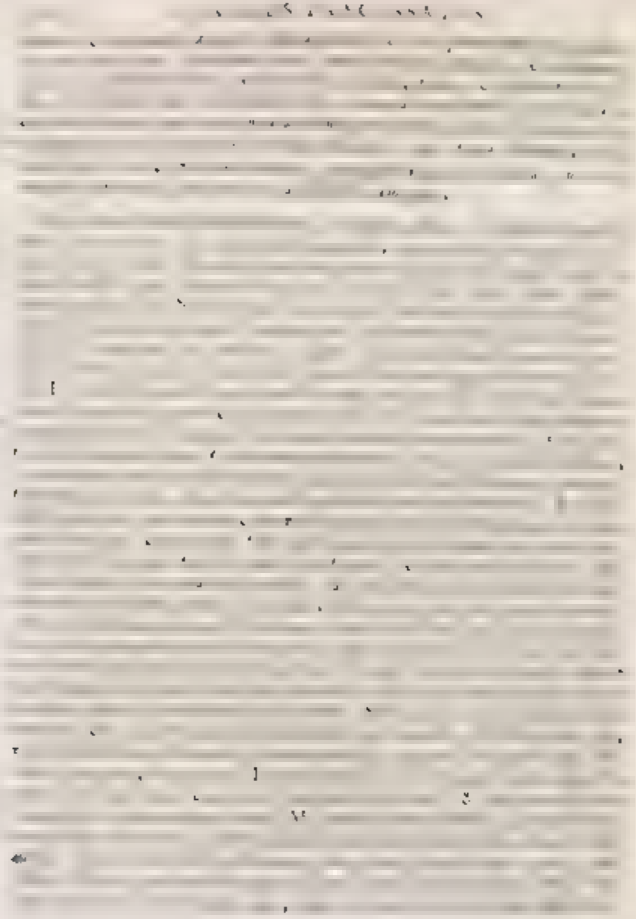
[illegible]& veteris philosophi habet, tellenas reterat, Nitrum pyr[illegible]
A[illegible]r, cumq
tuleris, audiamus quid sibi ve[illegible]*Willis* ac *Carte sius* de causa crystallizan
Carte sius, in sale paxillos qu[illegible]n comminiscetur, qui facile in mentul[illegible]

[illegible]li secundæ tabulæ paxilli non tantam habent libe[illegible]
[illegible], cum medium non attingant, hæc hypothesis de sale com-
mum cum nullam ad eam caussam, p[illegible]em ipsam habeat, Socraticum m-
[illegible]olere *Willi*[illegible]hermentatione,
[illegible]oni crystallizationem sa[illegible], propius figurorum co
[illegible], sponte sua in alias figuras com tanti[illegible]omnes fales efformari cen-
set, & rationem ac caussam redditurus, hæc subdu

simplicia, sed corpora ex sale coposa, cum reliquis principiis in exig

habent se, ut circinus, & regula in describendis fi

silline proferabit. Sal autem (veluti regula apposita) alte
, *atque intra confines à natura designatis coercet. Ubi fact,*
vegetabilibus, & animalibus, in figuratione rerum major occurrit varietas,



er hexagonas duas bas bus fuis cru
gnum, caprroli Vitrum, Acetor ac Hel ebo er octaedrum as elt fal V
, fed & i ima cor, cujus doc
e adverfum pari le Saccharum, ac Ce
Quercus fuo fal
ab inquilitione fua n
rarum a fale gemmæ p
Genitiana, Ruta, Fumaria, vernaculo peritorum patet cane ancito. Orum &
a Sereniſſ. M. D. Dominus
ecum, V
epant ſpargeret ad ravim uſque. Verum irrationabiles
Chymicorum jactantium traducat ſtoyca, amor

, ac ignorent, ignem, quem credunt analyſtam, ſa

ena, quos figuratum exiguitas in inveſtigatione fere ſudit, non
ubus aqua hæret, quacunque tabula flumen tranare, præ

ſue de bene, ac gener con ſophizandi methodu ſpecer
omnes quadrates diſtinctas à corpore rectè & ns op
am refert: inde ad Chymicos tra t, & deter n

putans tales particulas, q fic junctam, & compactæ unt, diuturnam tamen

é ad ſtatum fuſionis deducantur, illæ ſaporem ſuavem, &

s, ſe ſic et cum
nemæ mixtionis vinculo reddantur, cum jugum indigitatæ mem-

, & ſui juris jam factæ, ſponte ſua ferantur; ipſe ſa

porrò ac ner ſet
orum fundi, ideo tas acetu à ſale fixo non eſt illa, quæ eſt à partibus mercurii

, quæ ſpiritu acido, ac ſale volatili turget, in f xo
t, Ita tamen ad mentem proſata Vathulu, inconſulterum
, ni ſuperius dictus facilè poſſent reſpondere, ſa arum non
, ſed à Nitro, & Am nomaco habet Sulphur, & Mercurium,
rodarus, & propter m rerum omnium vocatur, ide
eſt idem, quòd a ſalibus, & quod ad hypotaticis s ſapores petantur, &
guris intrinſecis ſalium ſpecies ſaporum, ſed aliquis, q lis dogmatibus ſpiritum,
& animam addixerit, perget, ad ſapores calidum, frig n, ac primarias alias qua-
tita ſalinus & ſicco

uo exab tantias, ac
ne ſecturas, ſaporum claſſes explicant, q nni de ſ
l. fac. valde ſatagebat: etenim cu n pures ſint discren
dum, acre, acerbum, acutum, acidum, dulcis ſapor per ſ
modico hu-

à calore in materia crassa gignitur; per se quisque juxtà hanc
nullum
medios alios adinvenitet sapores, si pingui materiam tenuem ac ae-
sa sum habebis h n ut aret a sicca adinunde n calorem
materia crassa, & frigida, de acri & ac uo analogice ad
Verum si recte mens Philosophi peropatur, quàm nullo intervallo
tus, & Aristoteles, κ ἡ Φυσις το ξηρον suppletur in margine quod
κ πλειστ τ ὑγρ, ἐ το γεωδες, κ ἀερ ξηρ κ γεωδ.

n Proto
ber de sapore) a da prot as exter, quas
ne consist. accum terream
ideò terram

sapores in rerum sues us qualitates, scilicet non
plecti, & silentes, ut ita d aliquid docere arbitrari? Figuræ qua
(ut *Hippocratis* tem-
pore hoc philosophicum (animadvertente *Cæsalpino*) per c tates compendium à
Philosophis usurpari, hoc m plumina soboles inde

crassitiem, materiæ isti, quæ nihil aliud est, quam primorum corporum

ns sit efficientia physica; & tan

partiet fuerit affi &

, colorem à rebus gidis sola cem
, nec contactus, virtua am qualita

ipso tolle

Tangere enim & tangi, nisi corpus nulla potest res,
Verum corporibus tangi tactumque tenere.

[illegible] ad sensum mota vellicationem parit. Frustra tamen hic [illegible] dicam, alioqui, necne? Dò. Democrito- [illegible], si admittit natura corporea, quod secus fieri nequit, [illegible], & [illegible] ubi situm, & à sibi junctis variam nactæ fuerint

sceantur, insipida prorsus re[illegible]antur: hoc confirmabunt fusi sales Tartari, ac Vitrioli,

interpretes, quod vult *Aristot. dicit*

& sensibile pr

gano, ac ipse

lectus aliquod admit

n communis

em indicabit, & hanc

n pro gusta examen, si

e, quæ dum à sapidis tanguntur,

si gustus est tactus, no

et, & consequenter a

si statum ad p

, an si pra pa

mice, & pa

sed quasi u

ra, quemad mod

modi, placet tame

quæ assu

quod nolint membrana forsan illius obducri, sed nuda pr

na (vel adstipulante cum *Iosepho Cafferio*) exactior ibi contingat sensatio. Pa

atc illas spacium intercedat, dubitatior locus ape-

, solæ sufficiant, qui alias addat partes, & colligat quando

res in idem jac s plura solvi circa gustum problemata, sed alt-

Γέντοχε δοξεις

Credam videris alis forte c

Ideò contentus paucula tetigisse rem finire pergam. A O gano gustus sen-
tentias libens omitto, velut quædam comenta, q tur; evenire
tenim noverit (quamvis non rude in A us) alios membranam,
alios spongiosum corpus, glandulam alios, quo dam quid fungosum cum *Meletio*, &
his familia, Organum gustus esse, opinari, papillulas, quas præcipuè huic mu-
neri præfecimus. Multa ad gustum circà motum li m quæ-
bus rerum sapores, linguam ad palatum urgemus, ut disjic pressione sap
& plures particulæ alius, quæ ità expulsæ abierant ad latera ad papillas ipsas
reliquant, pereat sensus si siccescat l

Plures de gustus organo.

[illegible] à fontibus salivalibus, quorum scatebras primùm *Carpus*, *Zerbus*, & *Achil* [illegible] & ideo novitatis gratia, sive *Steno* sive [illegible], apud Italos [illegible] ciborum, qui medi[illegible] [illegible] [illegible] vorare [illegible] nervorum; qua pro [illegible] det, ad occipitium natura legaverat; ex quo conjicere possumus, deto[illegible] [illegible] [illegible] & [illegible] & [illegible] &

MARCELLI MALPIGHII DE EXTERNO TACTUS ORGANO EXERCITATIO EPISTOLICA AD JACOBUM RUFFUM,

FRANCAVILLÆ Vicecomitem Illustrissimum.

papillas forti

ita apice, reliquis quatuor,
o auctiores, & diaphanas reddo, & re-
ra effluere, non sine animi meerore (ut verum tibi fatear) intue-
gito humoris instar eas abire consp
os dominicæ conceptio in utrique pa
eam inter unam ex inæqualitate
papillæ consti
tur Sus, quem co co habere licuit, detracta dorsi unc
in quodam involuc
, evello, ex oblongas papillas, & fere pyramidales

ut, & præc

, in posteriori
ciores sunt;
ur angula, ve &
dulatam
ries densata tamen, ita ut n

ius structuram oculi

& in sui centro multiplices glandulas continet, quæ
parte, ubi superius exortum habere videtur, graciior est & sensim
apillas admittit, quæ inter evel in earundem quandoque h
laverunt.

ter, ſimulque à continuata attritione cuſto-

n eſt conſere, fibras pertoratas, quibus nerveæ papulæ ſeu un ſo-

Nec [illegible] & [illegible], unumquodque cornu eſt veluti virgularum plexus,

[illegible] Nec [illegible] & [illegible] ſubſtantiæ [illegible] Fabricæ ſquamarum, & [illegible] rumque

[illegible]
tui possint.

[illegible]
ats, in linguæ basi & buccis locatis.

[illegible] in subjecta cute, sub qua copiosissimæ locantur glandulæ [illegible]
sore structuram adiuvet.

[illegible]
dum forte valvulæ impediretur, ut interdum tensa debeat fi[illegible]

tuberant, per longum ducuntur, in quorum medio us vala. Hæ igitur copiosissimæ papillæ juxta morem è cute

it Indæi pedibus observatum sapiens recule

Bovum, & fœtuum p ectorum n cœpi rimari cutem, & occ riorem ma exquisito microscopio detecta, inter pilos, & excretoria suavis vasa c fissime dispositæ, nam acuta cutecula vestigium in t has assurgentes papillas, è nervaceo abr cutis rugæ fer mules nostris f cum in pecoris cut da præterea

colore inficitur, modò crim grum, ut in fim ut in piloto, mo- tangere potu, tibus vaetur necessar lam tute a,

mibus videbatur animu earundem papil- arum copiam, quas alias m , in locis præc dicatis reperiri, eosdem progi & que circumvolvi reticulari involucro, dem conspici, tu, quod mirum in me ipso com- microscopio etc quu bet in ma-

Hæc reperiri fe onibus deprehendi, ex quibus non improbabiliter deducam, ficuti ex grandior , & elatioribus papillis, aliàs à me in lingua observatis, gu- to reliquo am , non tactus vires etiam exent, adæquatum tactus organum ere ter haber

pe-

per[illegible] fatus est credere naturam appendices [illegible]
papillares [illegible] area cutem crumpentes parabile, ut facilè obvios externorum appellen[illegible]
[illegible] deprehenderet. Amplia enim in pleno
col[illegible]ora volen[illegible] Natura, ut innoc[illegible]

[illegible]

[illegible]

existente carnea, vel fibrosâ substantiâ.

tus per longum excurrit, à quo subobscurè videntur

prias promentes papillas, quas

hasque tofignes fibras exhibet.

tatis partem excurrentibus rete quodam fieri,

Cujus autem sint propagines, adhuc videtur dubi , ac levis pro hoc determi- pereffet labor, & cadaverum, brutorumque exigeretur ferax census, quod utrumque & impensa angustia, & graviores prohibent curæ. Ex diligentibus tamen divinæ sa mibus evincitur, in facie, brachio, cubito, & manu deinde in cruribus, & pedibus, ad latera omnia thoracis exporrig , ipso ità dictum, admittit, quibus non incongrue adde potest va- appellentes.

A

...ræ in avulsa adhuc cuticula retinentur, & in ... nor parte re-
... te amplexari a cuticulæ
... tactu erasescere, unde n.l
... ratio quodam, vel ap-
... ssimus Steno, sub cute in toto fere corporis ... habitu, sub brutorum,
... ariaque pedibus, & labris, glandulas multi instar imme... , & a tale loca l, ad
... quas per transversum extentus nervus ... n suis ramulis co-
... untur; venæ pariter, & ... propagantur, excre... per vas e-
... rumpit, quod eviden... los in brutis hac, à ... in bovinis narcibus
... compressione media exeuntis ... ris guttæ evident
... ac dispergantur, sicuti
Has sudoris fontes esse non ... sunt laudatis ...
... censeo ...
... appositam microscopii lenticulam ...
... leviter compressis digitis copiosas aquæ gut...
non absimilia philosophans, dum ex nebuloso, ...
... em corporis, tenuisque bebetur ... arum, quæ ad fauces fu-
... ceris, quæ omnia sub ... excitato sudore iucunde
tol...r. Nec ... poros esse, ac
... es, & quandoque morbo-
... fæ materiæ ... ture: nam constat, urinem, præter insigna

ra non exigua sunt, & maxime activæ, sed ex detersione, abrasis se[illegible] et pat- Pa-
[illegible] tua.
[illegible] nerum resiliunt, quare vel per insensibilia [illegible] non minime [illegible] ne perpetuæ
[illegible] p. Ex [illegible], cæterisque [illegible] a meipso expe- Si
[illegible] a. A nitro excitatur in me co[illegible] ligandis coptose solvitur alvus; & Hip[illegible] 6. Epidem. docebat, [illegible] ventris densitatem: cum ea[illegible] eadem sit evacuanda m[illegible]ria, diverso licet loco. aliquando contin[illegible], si per alteram partem coptose derivetur, minu[illegible]
[illegible] humoribus in libertatem evectis ex perpetuo ip[illegible] [illegible]tas ex continua separatione, & additione mat[illegible]
Hæc tuis profundis speculat[illegible]
doris usum [illegible] tam sentire disperis, h[illegible] [illegible]rem, ut madidæ forte papillæ [illegible] & [illegible]dam ex assiduo usu tententur und[illegible] [illegible] n plantis manu[illegible],

[illegible]ate inter nerveas papillas pili, & [illegible] nalibus observantur: Pilorum g[illegible] [illegible]fuliginibus; eorum tamen accurata structura manifesto rejecit Opinio [illegible] [illegible]s horum nostris mul- rorum a [illegible] promere rad[illegible]
[illegible], capitulo in ovali quodam [illegible]ro implantantur, vestit in florali[illegible], ad quod involucrum nervus eve[illegible] [illegible]n in pennis accidit, nam determinato ord[illegible] [illegible]bulus quidam nerveis p[illegible] in cute ejusdem fubor[illegible]

[illegible]m. I

[illegible] est ad pilorum quoque radicem analogas nervorum ta-

[illegible] Duos olim cursus, tuis iussis in Hortis, fontium, fructuum & florum coria, dulcem-[illegible], & [illegible]ate, A[illegible]ronem, Mariscotos, & [illegible] Vale[illegible] praelum [illegible] Academiae [illegible] Stratus [illegible] doctissimi *Caroli Fracassati* in Pisano Lyceo summa cum laude A[illegible] tomes [illegible] Tum *Laurentii Bellini de Saporibus*, in cujus, ut spero, lucubrationibus [illegible] praeclara, ac optabilia [illegible] & [illegible] celeberrimi *Joannis Alphonsi Borelli* [illegible] exarata, at redux in Urbem tuis mihi bres colloquiis. Vale.

MARCELLI MALPIGHII

DISSERTATIO EPISTOLICA VARII ARGUMENTI

DE

CORNUUM VEGETATIONE, UTERO, VIVIPARORUM OVIS, PLANTIS &c.

Ad Clariſſ

JACOBUM SPONIUM,

Medicum Lugdunenſem in Gallia.

PRÆFATIO
AD
LECTOREM.

Necessarium omnino, Lector præstantissime, existimavimus, paucula quæ de sequente hac dissertatione Epistolicâ Celeberrimi Malpighi scamus præfari. Cæterùm vivente adhuc Spomio Auctore nostro olim per literas fuit videre, satis posse eum premi vernaculâ dissertatione, quemadmodum signaverat, Typographum quendam Ingolstadiensem in Gallia, Opera quædam Malpighi omnia nitido prælo committere in animum induxisse, verùm apprime fecisse, quod multa adhuc apud Auctorem latuerint, quæ postea forte editorem ejus imperfecte possent obesse, quapropter supprimebat, ut si quædam adhuc superessent, eadem Auctor ipse transmittere haud dedignaretur. Sequentem itaque Epistolam variis argumentis, Auctor Spomio commissis, quam Typographus Londinensis, incuria quadam aut ignorantiâ in duas divisit partes, cum tamen solummodo unica esse debeat. Hunc itaque errorem nos in nostra hac editione obviam ivisse, Lectoribus innuere, inconsultum haud judicavimus. Vale & Fave.

Præcl. mo & Eruditissimo Viro

D. JACOBO SPONIO

MEDICINÆ DOCTORI, &

Ingeniosissimo Artis Criticæ Assertori,

MARCELLUS MALPIGHIUS S.P

PErcunctanti mihi, Vir doctissime, ac eruditissime, num quid novi [illegible] phus, quem junxi, dictis opusculis novam parit lucem, [illegible] hoc erat, me pluribus & à re literaria alienis distractum ne[illegible] [illegible] putabo.

[illegible] tur, lacinata cutem a; & reticu[illegible] fortiæ ita inclinabantur, & invic[illegible] squamosum pilcum [illegible] pora brevia erant, sent[illegible] verò producebantur & prope conum longissima reddeb[illegible]

tur. Varius quoque erat subst[illegible]ta modus, nam in basi papil[illegible]a haec corpora a[illegible]

[illegible]t crassities ipsius in basi nativam eorum altitudinem p[illegible]

[illegible], hocque detracto fundum & laeve corpus occ[illegible]

[illegible]ricem differunantur, unde veram sensum addi-

tum [illegible]dat. vegetationem in bove deprehensam, in Physicae additam[illegible]

[illegible]quat eorum est. Postremis quoque mensibus in foetu adhuc concluso ossea lamellae (quibus cranium compugnatur) ob aquam incipiunt, & fract[illegible]

[illegible]absorbendis spatiolis, unde supra cranium oleum

[illegible]atum. Corium quoque obducitur, à quo tactus papillae affer-

[illegible]rato reticulo involucro, quod cinereum est, conjungantur & nigro ambo succo conglutinantur. Haec circa cornuum basin inclinatae versus apicem dir-

n capit, & internus varie contin
ut substantia, quæ offensi locis recte natura

inclinatæ versus apicem, summique reticulati corpore unitæ, tot conica

oque sub diversis planis a producto c
unt & includ ö per longum cor-

emanant, quæ in cornuum substantiam tunicatæ tondescunt, & i
e osse cunctar

est. rocetto

& ubi continuo & pleno o
dius patent. Pr
t tubus efficiatur, p ones tenent o
juntur, unde relictæ areæ co ates obloi
figuræ efficiunt, in quibus aliæ quoque ab ali tibus parum offens
juntur. Omnes hæ concamerationes mem
substa

um parietes in basi
, &
xquicat. Horum interior superficies nigra est, & fistulosis foram
pex acuminatus fondus, lucidus &

Caeteri otiuntur cornua ita, ut urgente interiori offen

[illegible] villarum ordines à basi erumpentes avulsi à corio separent [illegible]

[illegible] r, præterquam in apice, interior enim cornuum superficies, eva-

[illegible] te intus ossea appendice, externis quoque cornuum mul-

[illegible] obductum rapiatur, & novum quasi cornu, licet minimum,

[illegible] papillarum corii, & reticularis corporis productione, sed ex e-

[illegible] exteriores autem redditæ sunt in monstruoso cornu tactus pa-
[illegible] le succo, per filamentorum reticularem contexturam, quâ co-
[illegible] x, excurrente, vel exhibente in continuatas papillas, & in n-
[illegible] alareque corpus, ut in ungularum vegetatione contingit, q-

[illegible] est, & sudoris, babrusque effluvia per propria sudoris vas-

[illegible] s & fixatis, dum interim evaporantibus alcalibus & aquosis pa-

atur, haud dolebatur, sed immediate expanso pelvi, vel fa-

ela, circa uterum olim molliebat. In hac itaque obsce

s torquentur. Interierantur autem ad invicem, præcip

molem pervadentes.

[illegible] etorget, rectus ele-

fertus, & miserùs elo[illegible]

dem Electrinosum charabis instas relinquat eradiamentum.

[illegible] singula haec pateant, tibique cibus reddantur exarata,

& [illegible] orum proceſſus, vel deferentia [illegible], an *Graafia Lacuna*, an poſtr[illegible] ris *Bartholi* [illegible], in quo Parentis, & Avorum redivivæ gloriæ ulteriorem mor[illegible]

ſtudia placentis amicis indicaſſe.

[illegible] eſt, ſubvin[illegible]lma exam[illegible]

bus adeo obscura est, ut pene impossibilem sui indicet
que intrico ita complicantur, & va
etiam accuratæ. Et tamen

Nam formantur inclinationem. Inter exaratas carneas fibras copiosæ extenduntur pelliculæ, seu molles tunicæ, supra quas amplissimus fere
diversis planis superlocati,
eriphetum spectantibus, unde inter proximos, sinus fit mu

et gravidans tempore pellicula, in quædam adnascun-
chorion & placentam elongatæ. An exarata corpora jeiculanter impu
uterus placenta uterina una cum chorio humectato annexa. Placentæ compos
atem & mucositatem, variamque
uterinam contexturam peculiari . Et sicut cotyledones p
loco cerebri, vel coli inser-
vat, ita placenta, quæ e us, scilicet ex partibus ute-
las, quales
carnere hujusmodi quandoque, sed lacunata tantum corpora sanguinis vasculis irrigata
observavi, quæ plurarum radiculas æmulantur. Uterinæ placentæ superficies, quæ
alis est, nam videtur appendicibus subingredi uteri sinus &
tes, quasi cotyledonum ritu.

nenta,

neum, & fortasse fit dubium, quod versus centrum perpendiculariter [illegible]

corpus centrum, & quandoque profundius ovulum [illegible] ppenace magnitudinis [illegible] um. Sæpe incipiunda [illegible] a profundo usque ad papillæ centrum [illegible] quo diaphanum [illegible] u igne in albumen co[illegible] lum, vel genitura custodiuntur appendice donata, non valde dissimili quoad formam, [illegible]

[illegible] anatolam, lucernique corpus primo excitatur. [illegible] testans substantiam, & hanc fœcundata inclusi ovule [illegible] [illegible] aptabiliter coniges, luteam hanc, glandulosamque [illegible] [illegible] æqualis magnitudinis extent, in quibus non succum tanta [illegible] plicatæ. His addam in pluri[illegible] coctis præcipue, vasa [illegible] test, non unicam vesiculam [illegible] uminis abunta, pro generatione lutei anius cor- Dubium [illegible]

ginam femini occurrit, ejusque volatiles particulas coercendo

ditate contenti utero communicatur, ejusque fluidis partic[illegible] ratur tra, ut

...ico ullo masculini seminis ipsius fœcundari, à quo motus princip...
sellat accipit. Forte *turpeni ales* fortasse liccos, vel plus justo nun...
dicebat, ut is enim generatrix vis non coercetur, nec propagatur, in his ve...
...
...ramur in pudendorum, in quibus ingens accessus vehicula extrorsum appendunt e...
...a qua glutinosus perpetuo exsilit ichor in concavitatem vaginæ, quo ma...
...semen, antequam eam à uterum fœtus cruentus humor excipiuntur & lovi...
...
...catur, quod pariter in pudendis conjectari licet, in quibus seminis fe...
...tur ita, ut successivo etiam tempore ovu...
...maceris non solu cicatrici, in qua mate...
...n ab eodem fœcundatum aspergit & affundit, sed totum ...
...
...ubile est contentum accum fœminei seminis, vel salte...
...e loco esse, & inde incrementum & propriam energiam, non cum ma-...
...
...

Sed pectora mentes tuæ, calliaque acie detegesta, ut alternas non liceat meas cogitatis tuam præoccupare phantasiam.

Naturali successi motus in plantis. Ab animalibus interea ad vegetantia transitum faciens curiosam quædam recognitionem, quæ in dissectionum analysis confirmationem semper observavi. In plantis igitur recens excisis experimentis ascendentis succi motum, vel descendentis, vel ex utroque fluctuationem, aut sub eadem annulari portione textam, & plantæ superior portio, supra factam sectionem, perpetuo incrudescit, debilitatoque succo extorum, inferior vero naturam adipiscitur radicis, solasque interdum dentes germinat. Hanc eandem sectionem in humano trunco parte, & radicum plexibus excitavi & perpetuo superior truncus, vel radicum pars augescere incipiunt, & ab hac radicum copiosæ emanarant, inferior vero rete, atque tandem portio frequenter gracilescendo tandem contabuit. Quæ confirmavere indicarat olim nam facce remotus motus, ab extremis ramis ad primas quæ radices, unde intercepto alimento compressione, vel actractione vasorum, remotiores plantæ partes toto non gaudent alimento, tumorque exrelabente succo evacuatur. Propagatur autem à loco ipso undique ad ramos extremos apices. Quapropter florum cultores sonto in gyrum cortice nudas arbores, tenellum ramum à paterno emancipant trunco, circum allusa madida terra, in qua crumpentes novæ radicæ supra sectionem egregie accipiunt, alimentum enim demora versus propulsum, vel expressum non potest prope cortices sectionem stagnando tumorem excitat, sed foras ruendo radicolas abfumitur unde sui juris factus surculus, paterno tandem amputatur trunco. Non ita in radicibus prope flumina, quarum portio obtruncata aperto gaudet aere, ab ultimus ibi fibris gemmæ radicum loco erumpunt, quæ in ramos sursum attollantur. Hæc sunt ea, Vir doctissime, quæ tibi significanda erant, & quæ tuis exculta ac limata observationibus stabunt, diuque vivent, Tuo enim splendore est apices ipsos & priscorum monumenta temporum ætate, novâ eruditionis luce donare, & ab interitu vindicare diu vivas, dum, me tui addictissimum profiteor. Vale.

Datum Bononiæ calend. *Novembris* MDCLXXXI.

FINIS.

MAR-

MARCELLI MALPIGHII
EXERCITATIO
DE
OMENTO, PINGUEDINE,
ET
ADIPOSIS DUCTIBUS.

[illegible] ad recte prehendendas dotes, aut rem [illegible] motus, quibus [illegible] ad [illegible] & exercitatas ad exportandam perfecta [illegible] [illegible] pone [illegible] ibi [illegible] [illegible] [illegible] Quare de [illegible] [illegible] O [illegible] [illegible] [illegible]

busdam in partes divisum nomenclaturas recepit, ut

asservari, & *Bauhini* Lienis illustrem in tu nores, & apostemata

uis totam bulis perta

hitas, quando in Ranis natan[illegible] adipo, ſtrias, ſ[illegible]
[illegible]ppices oblongos, oleosa ſubſtantia refertos,
vir[illegible] In Ovibus autem, Bobus, Capris, [illegible]
[illegible]rex conduplicata membrana, in cujus medio [illegible] excurrunt vaſa, ad quo-[illegible]
rum latera attenuatur copioſa pinguedo; non a[illegible]
humano Omento mox deſcripta conſ[illegible] Interim ſtriarum autem ſpatia continuatæ binis
[illegible]mæ, & in aliquibus etiam portionibus [illegible]

[illegible]do, & præcipue a latere; in jecur propagantur: hæ pe[illegible] raſſicantur, & ramos invicem unius conſpicuos ſp[illegible]efficiunt, qui[illegible]
rum ſonus a fibris deſignantur, unde ex horum multiplici[illegible]e Rete dicitur: nec quic
[illegible], a majori etiam trunco
[illegible]colares multiplicat propagines, non abſimiles ramis jam deſcriptis in pul
[illegible] & arterias jungi rete in-
termedio. Ad[illegible]æ inſuper prop[illegible]
[illegible], & arteriis, quæ propagantur a[illegible]ulis pinguedinis, quibus co[illegible]
[illegible]culus, ſeu ſtria

[illegible]laris ſanguineorum vaſorum pro-[illegible]
[illegible]ſpicitur, plura, & [illegible] ſub communi tunica, quandoque ſe-
quuntur, per modum retis excurrentia p[illegible]ſtria à ſtria in ſtriam, & nonnun-
[illegible] hæc interdum ut in omento bvſ[illegible]
[illegible] ſolum turgent pinguedine & evidenter
[illegible]ontrà ſubjecto reti, ſed ubi te[illegible]antur, pinguedinosos [illegible]obulos enucleare
[illegible]

Eadem in Vervecum Omenti portione, ubi ruditer v[illegible] obvelatur, depre-
henduntur, quæ a ſtrias, adipoſis globulis refertas, erumpe[illegible]uoſa via ad oppo-
[illegible]

In Pice, Spinula Siculis dicto, circa o[illegible]
[illegible]ate, ſupra quod laticum adipoſorum va[illegible]
ducti microſcopio obſervantur.

In Omento Cervino, pinguedine vacuo, obſervantur in adi[illegible]
[illegible]poſſit[illegible]
[illegible]ur, & nonnunquam retis ad inſtar applicantur; [illegible]
[illegible]conjunguntur, & iterum extenſa tandem ad [illegible]

[illegible] Bovc & p[illegible]bus Ovi[illegible] & Capr[illegible] O[illegible]
[illegible]ibus & tenuibus [illegible]
[illegible], quæ in omentis ubique ramos adipoſos [illegible]

In caninis Omenti portionibus, ubi a ſuperficie [illegible]
horum ductuum copiam ſæpe mihi videre contigit ſupra rete [illegible]
omentum ubique reticulare eſt abſque [illegible]

[illegible] viscoribus [illegible], & [illegible]

[illegible] faeculos p[illegible], & [illegible]

At quoniam sæpius dubitavi, an omnes reticulares propa-

[illegible]

ut hoc exploratum haberem, I eatura [illegible], &

huc vi[illegible]

[illegible] & [illegible] ecta nec res

[illegible] nata emetiere, cæteris min[illegible]ma obtectatis, ita ut h[illegible] adhuc minu[illegible] sit, an omnes Omenta propagines ren[illegible]es sint propagines sanguineorum [illegible] Dubi[illegible] ternorem exhibet ansam Leonissæ Omentum à Præcarii[illegible] acculorum, seu striarum adiposarum appendices

[illegible]

[illegible] & [illegible]

[illegible]

[illegible] & [illegible]

[illegible]

[illegible] & [illegible]

[illegible]

tamen non poteſt, ultra hæc corpora, fibras nerveas, tunicas a nervo, tunicas

[illegible]

ten ordine, vel reticulariter noviceris, unit

[illegible]

natura non ex toto obliteravit meri[illegible]
ſim gracile endo, tandem, [illegible]
oppoſitas ſinas, in his tamen, [illegible]

[illegible]

[illegible] absque membr[illegible]

[illegible]

[illegible]

( ) in Lienis gibbo adornatum ap rapid s instar concretum, obser-
fitis membrana pi
fium. His accedat, ex ornatum consensu, fibrosa corpora co
Hæc, prout videre potui, a
spleneo vase int spleni unicam, &
, an cava sint, & cujus p gines sint; & quem
ideò abs re non erit, de his quan ne dubitare, an pos-
a radix adiposorum corporum, vel
A unsip m connexionem cum O m , est Ventriculus, cui
fivertsa à sanguineis haber
Nec obstat eano, dum scimus in Ventriculo, & c nuatis Intestinis media at-
A t autem p q , p Iter c x ,
per p a & a
noli sacculi, qu
si globuli, reticulum enim rete est, effi ut autem facilli-
da tunicæ vasorum adiposorum tenuissimæ, & poros for-
gias in Cive Aitenburgensi decoctato, & publicè dissecto
Bar ( )
vi ut
bdom e succedat, quibus
m manu e videatur, Lib.
e, coliquato & attenuato universo corpore simu
edens serum deflucre docet addit autem ii

obi sanguinis serositas à Liene per vas splenicum, per medium excurrens Om
sanguis fortè evectis particul acie, & ex Omento in abdominis ca
præcipitatu

etur, si enim ad glandulas, ut nonnulli ex
lacteis deferatur, commune adeat materia,
vel arteriis deduceretur. Ex his igitur probabiliter recolligi po-
dem, ut exigua adipis porti
tibus misceatur. Scio in natura possibiles esse portoresalias vias nobis adhuc
rum sectio lucem eruet

De Pinguedinis natura, ut prime præ cæteris recolligit accurat vus *Fr. Tit. de-*
ratus Schenckius, suspecta multis jam sa monita, hæreque adhuc iis sub ju
dice, pars, a rem ego, quid sit, à quo, quomodo, & in quem finem
b

focarent, vel arcerent, quorum quidem rationes tusè est apud *Schenckium*.
In assignandis rursum p inem, ossiumque medullar
inter sevum, adipem, p
Non immora emersere dissidia versantibus
quandoque ex colliquata carne fieri credidernt. Nonn
tum tranere, quod plerique interpretantur ex materia comm
rus: Omnes tamen, paucis exceptis novissimis, à sa
nerari una cum sanguine in hepate ex venis & ar
defert in sanguine superenatant & tandem me
humas venas in pancreas delatæ, oleosa, inquam, attracta à
&
Tom. II. Gg seu

levater hæsitari potest ex his, quæ mox dicenda veniunt.

& basi adhærent: Per hanc propagantur venæ, & arteriæ, quarum

ns exacta u . Membranosi illi sacculi diversimodè figurantu

pellucuarum copiosæ observantur.

appendantur.

penetrant,

& Pul-

turgent, & præcipuè in decrepitæ ætate animali infarctu [illegible] vala per universam Pinguedinem in ambitu [illegible] am corporis locatam propag[illegible] velut radice, fluant, sensus hucusque non indigitavit, cùm tamen Omentum dorso affigatur, velut centro totius corporis, non videtur inc[illegible] Adiposa membrana, quæ per universam propagatur, in om[illegible] n[illegible]ostenimus posse [illegible] & [illegible] co. observavimus.

Circa Pinguedinis generation[illegible] [illegible] bus retenta. Pinguedinis collectionem non obser[illegible] Nec obest dictum *Fabrici ab Aquapendente* [illegible] in pulmonibus, hepate, & [illegible]e Adipem non e[illegible] membranæ, & copiosa vasa, qu[illegible]nec ad Intestinum nos[illegible] quam pulmones [illegible] circumambiuntur valorum rete, & in alis [illegible] bus eorum ramuli in exuviis etiam observantur. Usui eius membranarum [illegible], quibus recingitur adeps in saccellos distincta, [illegible] indicat, quam & sanguinea vasa, in ipsis ramificata, videntur in ipsa[illegible] m fabrefacta, quando ad renes, & ad ambitum corporis venas, & [illegible] as quidem [illegible] h compactiat ad [illegible], [illegible] hanc fabricam ad propagandam, conservandamque pinguedinem [illegible] factam fuisse potius, quam casuale, & fortuita collectio[illegible] obortam fuisse.

[illegible] ferras observavimus, & velut adnatas trunco venæ portæ [illegible]pe jecur, evidens [illegible] [illegible] collectionem non fortuitò quidem hæc, sed in hac val[illegible] [illegible] pinguedine receptacula, [illegible] [illegible] [illegible]

mento Hyſtricis,
rum oppoſitum,
Coralliorum rubrorum vulgò coronam æmulabantur.

Cavitatem

In O
offorma
ria, cæcam
conſtituere, cujus oppoſitum experientia docet
ex neceſſitate cavitatem repleviſſe.

venas pro lactis generatio
jus confirma
nere Ovi ento

lus escam repetit, quasi ruminationis gratia, unde Hor
tus ruminare dicit

[illegible] laxitate, ut repletis spatiis ipsa corporis pulchritudo conf
fletur, ut partium [illegible] calor foveatur, ut of
fibus alimentum pra
[illegible]
hum caloris facessere, præcipue in corde, ne scipsum corr
Talia copiosè [illegible]
humani ingenii fe
[illegible]
[illegible] calore, q
in quacunque sua latitudine [illegible] an potis est cruditatem [illegible] dirt, quin & dub
tari potest, an calor, cui, u [illegible] iuuetur, potius sit ne nobis
[illegible]
lor
[illegible]
in os, non apparent autem, quibus cibus in Ome
tum & ab eodem [illegible], & vasa quibus Ventriculo com
municet, diversam [illegible] usus in Ven
[illegible]
Vesalius d [illegible]
Ventriculo [illegible],
edere. Quoniam tamen natura hanc partem in tantum aux
[illegible]
[illegible] ex torrentibus.

ceribus actualem qua-

si flammam, & inde calorem. Quon

u bortalse fola materiæ neceſſitate

torem obſervamus, quam tran-

ſcendus, ex quotu

r morbi. Hoc conſimili experimento manifeſtat ur Lixivium eum

acre, quod fuſa ſalia continet, ſi oleo miſceatur, ejus edo evidenter ren-

tingere ſolet, at in vino obſervabat laudatiſſimus Willis, colliquescen

Pinguedine præcipue observantur, ignea scilicet [illegible], quæ latura cum pag[illegible]

[illegible] recendum, & hxandum, quam ad fovendum, fo[illegible] ac[illegible], &

[illegible] accidit. Quapropter tantum abest, ne Pinguedo contentis igne[illegible] mentationis motum promovear ve[illegible], quin potius confuetam [illegible] [illegible]nem impedia[illegible] [illegible]m hæc [illegible]ficia inchoativ[illegible] [illegible], assumto co[illegible], [illegible]que partibus, ubi [illegible] pora va- fa in venas. Pe ficitur vero una cum [illegible]a in pulmonibus, in quos universa corporis vasa humores tanu[illegible], & ibide[illegible] fi[illegible]

[illegible] Tomo [illegible] [illegible], & [illegible] & [illegible] [illegible] Cui tamen satisfactum in censeo, si dicatur saltem ex comu[illegible] [illegible] in diversis visceribus exc tatis fieri novas adapt[illegible] [illegible] & [illegible]centarum, ut facile sit, hujusmodi, quæ nomine saltem exponimus, si non manifestari, saltem de novo coa[illegible] [illegible] in aliquibus; renes verum lapidum minerum perpetuo [illegible] [illegible] [illegible]

e, & tandem quasi obscurato, vel obturato pulsu absque
interalle, non sine respirandi angustia, quin & plura animalia,

ta, revocet. Hæc eadem à *Marcello Donato* confirman-
n *Principe*, & propriis observationibus concordat præcipu-

re Pinguis in Caseo, & Oxygala, & neque
determinato liquido fieri substitat-
o. In præcitatis Rans adpositæ strix nectu
ut probabile sit oleosæ substantiæ portionem Ovorum et
tum Olei extrahatur.

tinens factum adhuc vivum.

Ultra corporis ambitum, musculorumque [illegible] ita peculiaribus locis Pinguedinem locavit, & præcipue circa Cordis [illegible] ngeri non caluit quidem, sed [illegible] ingenito naturæ artificio cen[illegible]ciuum: nam [illegible] ne respersit partes [illegible], & auriculæ extremum circuit Zona cu[illegible] De usu hujus Pi[illegible] tractatus *Julii Ja*[illegible]ue, ab ipso autem ut [illegible] refert *Schenckius* [illegible]dentis pabulum sit, qui nihil [illegible] venientis sepium pen[illegible]ut hæc positio cui enim Cor ex [illegible] his quæ nervosus *Ga*[illegible]n *Musculi*, quum ex *Har*- *væo* posterius g[illegible] primi cardis, scilicet sanguinis, cadit [illegible] & Galeni de C[illegible] detur potem[illegible] vel ta[illegible] [illegible] fui, si hum[illegible] ret, & extingueretur fa[illegible]ta, quàm [illegible]ius si retundi[illegible] esset calor, non quidem cordis, sed perexsanctus sanguinis, ope innumeris musculis contingeret.

Observamus Pi[illegible]dinem in sacculis recolligatam ad cordis basim, ubi exortus & propagatio [illegible] quibus constatur cor, & in cæteris ubi Musculis non solum [illegible], & [illegible] *Plempius* copi[illegible] & [illegible] scebat *Aristoteles* ex hoc non rigere oculos, & [illegible] Problem. quæ musculos rebat, cur pingue eorum abstinatur, qui se laboribus [illegible]unt; caro autem musculosa nunquam emacietur, quod quotidiana exp[illegible] t ut docent plu[illegible]

A[illegible] [illegible] & [illegible] di possint, sed forte tensionem earundem juvet ad celebrandum [illegible] [illegible] ex motu adaucta circulatione major portio A[illegible] guedinis moles ambitu, & musculorum interstitiis mi[illegible] [illegible] art etiam potest.

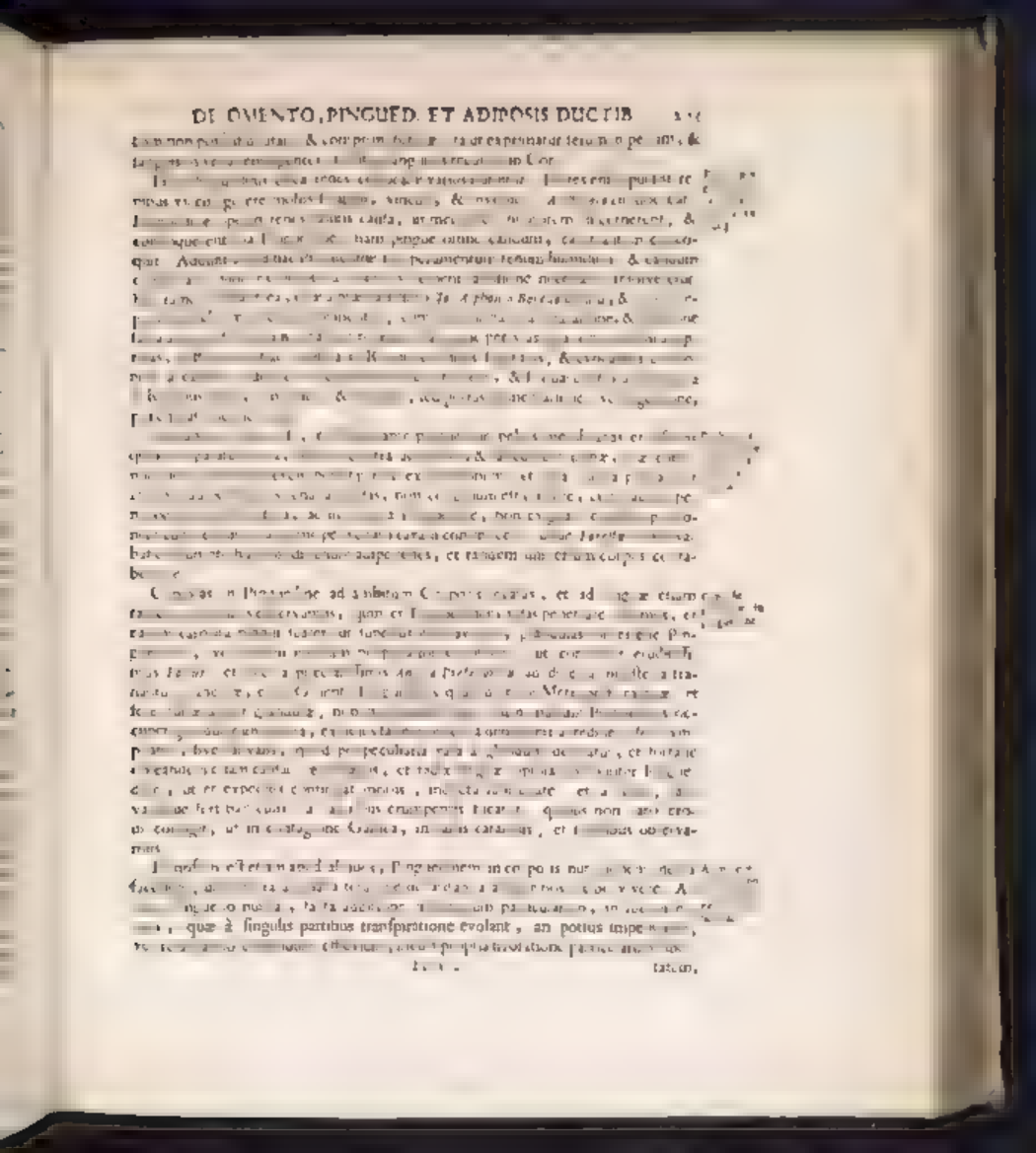
Aliud etiam addi posset, carneas scilicet fibras cum ex[illegible] A[illegible] imbibi, Aliud & venire cordin ad compescendam scilicet nimiam particularem [illegible]

transimus ex ipsorum [illegible] Carnes, Cineum, & [illegible] Oculorum [illegible]

[illegible]

[illegible]

[



tatem, easque in propria compage manutenendo, utrumque probabile est.

Conclusio. Dum hæc recensemus, amice Lector, etiam mihi tantum probata, ut fere cuncta hujus sæculi ingenia, & oculi perfectiori microscopio adjuti, ad hanc eam rationem hæc omnia exigentur. Nec miremis, si interiorum brutorum, vasorumque animalium sectione quasi præeunte luce, incassum, meamet opus, quod primo de partibus recreat Arist. *Quamobrem eiusmodi disputationem perpessionemque fastidio puerili quodam sprevisse, moleste ferendum nequaquam est, cum nulla res sit natura, in qua non admirandum aliquid inditum habeatur.*

MAR-

MARCELLI MALPIGHII

Philosophi & Medici Bononiensis

EXERCITATIONES ANATOMICÆ

DE

STRUCTURA VISCERUM

Nominatim

HEPATIS, CEREBRI CORTICIS,
RENUM, LIENIS,

Cum Dissertatione

DE POLYPO CORDIS

& Epistolis duabus

DE PULMONIBUS.

SOLERTISSIMIS

ANATOMICÆ SECTIONIS

CULTORIBUS

EJUS IN DIES GLORIAM

CUMULANTIBUS,

CÆTERISQUE

SEIPSOS NOSCERE

CUPIENTIBUS

RUDES HASCE INVESTIGATIONES

EX ANIMO COMMENDABAT

Marcellus Malpighius.

PRÆFATIO.

Primarium illud elogium, quo naturæ artificium in architectandis minimis animalium moleculis celebratur, jure merito maximis earundem partibus adaptari posse censendum, cum una, eademque sit, & constans naturæ operandi norma in minimis, æque ac in maximis, & tantus videatur eorum in natura usus, & defectus, ut ingentes etiam moles sola minimorum compage erigantur, quin & tota laboret natura in minimarum nostri corporis partium coagmentatione, ita ut singula quæque quantumvis, diversa, quibus viventium structura coalescit, compendio quodam ipsas construant, juxta illud *de loc. in homine*: *Corpus porro ipsum sibi ipsi idem, ac finitur est similiter autem habet, & parvas, & magnas partes, & si quis minimam corporis partem acceptam inde accipere velit, totum corpus affectionem sentire quantacunque tandem ea fuerit, propterea quod minima corporis pars omnia quæcunque & maxima.*

Nec naturæ inopiæ imputandum dum minimorum ope utitur, sed sapientiæ ejusdem artificio adscribendum, generare etiam, & corrumpere præcipua magis quæ universalia naturæ munera videntur, quæ significantius expressit Hipp. *Generare idem est quod commiscere, Perire, corrumpique, ac minui, idem est quod secerni unumquodque ad omnia, & omnia ad unumquodque eidem sunt.* Et quoniam miscere, & separare sunt minimæ organizationis effectus, ideo in magnis, complexibusque corporum compingendis minimorum usum necessario ubique parat. Notum optimo, verisque est apud naturæ Mystas, quamcumque mistionem, exclusionemque omnium fieri incassum, ita ut in ulcere, sanie, seminis, & aliorum cribratione sensus, opticis etiam adjutis instrumentis, nequaquam eorum tudem etiam structuram ob exiguitatem, attingat. Nec mirum, nam si ex sanguine, vel alio corporum humore, veluti ex secundis rerum

grate-

[illegible] vel deserte exeuntur d m [illegible]ze, [illegible] [illegible], [illegible] [illegible], [illegible] [illegible] [illegible]

Nouum [illegible], nouum me de Cerebro Hepate & Renibus allaturum [illegible] labores, post meos illustrium virorum, & [illegible] Fracassati & Re. me absolutissimos exercitationes [illegible] placuit cum bono Deo hos nouos observationum fructus [illegible] vestris, ut vocant, [illegible] communicare. Tempus porro etiam ansam suggessit, & pene [illegible] ut considere possit [illegible] quæ non ita dudum [illegible] sunt. Veniam [illegible] quæ fugaciter cognita sunt [illegible] æstimationem præbere animus est.

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DE POLYPO CORDIS.

Dissertationes

DE PULMONIBUS.

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DE

DE HEPATE.

CAP. I.

Continentur inventa quæ ... hepat...

...dis inventis eruebravit, ut nihil amplius optandum videatur. Quo-... terax est naturæ penu, & variis subsequentium iteratorum placitis, quandoque jam denudata veritas, iterum obvelatur, ideo non ...

...mordis suæ generationis jecur rude esse, & propemodum ...ne, videriqué solum rubicundam, & sanguinolentam affirmonen *Glissonius* autem inter parenchymata, pulmonibus, & renibus annumerat, addit tamen huic aliquam ...misceri ex actuali ipsius, & continua reparatione. *Rufus* perfervi-... *Schenckius* ... placito ... tas, ... viscus appellet, friabile tamen ... necessitatem credidérunt Medici, & Anatomici, ut hac vel vulnere, vel erosione sublata, præcipuum ... tumoréque, & morbosæ collectiones ... factos carnis meatus ... & ... bus, qui ...

quæ [illegible] & [illegible] abnoxiis latetur.

Partes hepatis ex ramulis portæ & venæ cavæ compositæ.

Quæ ex arboribus exterius patet [illegible] constare, [illegible] hepar, [illegible] tabulæ propria, [illegible] ramulos ipsas quidquid [illegible] proprios [illegible] ramulos Asotiqui [illegible] referente omnia [illegible] & [illegible] & [illegible] & [illegible] [illegible] [illegible]

Subsequuntur mesaraici ordinis annulati, quorum hepar ab exterioribus, [illegible] ſtura non valde diſtat; ut in mure, &c. *Severinus in Zootom. in Mure*

quibus pulmonies connectuntur pleuræ, vel saltem inæquales [illegible] apophyſes verſus ſeptum transverſum pendentes conſtituuntur, & quoniam vaſorum [illegible] ſcinde oſſurtas & testudas efformentex conglobatis extremis lobulis hepar.

In *Sciuro* elegans, & clara eſt jecoris com[illegible]mo namque in multiplices lobulos in plures lobulos diviſas indicat, Elegans & clara jecoris compoſitio

[illegible] aliqua portione obtulerit conſpiciendum, ſortis ra[illegible]

rerum compagem, qualem paravit natura, dilu-

ita, & contermini lobulorum

petitam

Glan-

corpus ramificantur, ut lu- ad singulos

legent.

CAP. III.

Hepar glandulam esse conglomeratam.

internus, & externus infinitis pene glan[illegible] ut inflar ficarens se observatile fatetur nec credibile est, eas adventurias fuisse à morboso [illegible] uctas, ut censent ob

motum, recipit, cribrat, & per alia diversa, novasque vasa contento semen, seu

[illegible] probabile est, ut appulso humori subservient. & licet totus uvæ [illegible] , ut in illa contatur, quæ & ipsa [illegible] stat innumeris lobulis, qui co-

[illegible] rior, differunt autem interna structura, (quæ [illegible] tamen alias nonnulla promemus) exter- [illegible] ibusque inde separatis nam [illegible] formari potest, in fructibus, exiguas [illegible] is acinis componunt [illegible] , cujus ope de [illegible] paratus, in peculiar [illegible] em peculiari ductu eructatur, quæ omnia non ita adamussim in conglobatis [illegible] debis; nequaqua

[illegible] detur eius caro, & compositio & fic[illegible] s erumpat, il[illegible] n non huc usque innotuit [illegible] omeratis accidit, [illegible] tum est [illegible] is itaque probab[illegible] conglomeratam esse glandulam, cum in diversa fruti[illegible]

gore effluat, & dilatetur.

CAP. IV.

Proponuntur Glandulæ, & solvuntur.

Hæc inter glandulas placitum Clarissimæ, his insistendum duxi in animo, sed ut ei potissimùm abentor philosopha, occursque meis occurrére, ap

pictæ glandulæ substantiam, & mu

dignum, supremam nostri corporis partem dijudicâsse

sitatem, & usum; deficiente enim in pancreate con-

incrabuem subsequæ læsionem quotidie observamus, cum

Vas-

Warthonus to
tumorem, l ractata prima coctione, tandem chyli dist
nem ventricul licio, ultimo accendantur fi
hepar ipsum vena is ut plores, &
is, ta tamen, q is munus expleat amplissimo

fos acin spatium occupantes dispergere necel
ctione, ut sentiam discrelcat, ideo i

um in visceribus magis conspicua dist il
m in glandulis, & parenchymatis seperabilem subst
cui fat est dixisse, ramorum propagines, quæ
s plexibus conspiciuntur, non penetrare carnem, cum ip

His duas alias ad et cum corde, pulmonibus, sicne &
guam quoquomodo immutare, glandulas autem & sang
evincunt, nec undequaque verum est glandulas perpetuò sem
quæ interius omnes rubent, fatemur in aliquibus con-
globatæ portionibus exsitul unpeose etiam rubent, quod in glandulis ad
inguina observavi. Et polli o nondum certum est, an omnes glandulæ succo nu
tritivo, vel ejusdem depura que ministerio incumbant, cum salva

CAP. V.

Porus biliarius est hepatis excretorium vas.

Conclusum est [illegible] olleant, quod inductione, ducibus clarissimis viris *Sylvio* & *Ste-*

[illegible] seu saltem peculiare hepatis vas esse

[illegible] dirigi ostendit, licèt nobilissimus *Bilsius* dimisso vinculo con-

[illegible] quantum expedit negotio nostro, satisfaciamus,
[illegible] phaticorum à penitioribus hepatis partibus ab A-

[illegible] tur, eo quia, ipso docente, recta pertranseunt par-
[illegible] hepatis [illegible] am capsulam adeunt, quod non accideret, si in singulas jec-
[illegible] ter ramulos etiam *Charleton.*

Ita

Iis omnibus accedat ratio, si ab hepate e sanguinis primum exortum traherent lymphatica, non esset major ratio, cur ab uno lobulo, quam ab alio entia [illegible] cùm fere innumeri sint, tot eriam necessario essent lymphatica: quæ tamen ex ea hepar pauco comprehensa numero obstruantur, & quoniam videtur multo- [illegible] ppensis lymphatic [illegible] his omnibus valde pr [illegible] hepatis excretorium vas esse porum bi- [illegible] lymphatica ver [illegible] ductis inseri, nullumque ut [illegible]

CAP. VI.

De Hepatis usu, & an sanguificet.

TAnta est humanarum rerum vicissitudo, ingeniorumque varia fa [illegible] ter speculationes, ut nec uno momento eadem persistat, res, quas quidem grummas in solo jecore ità cumulatas vidimus, ut multarum [illegible] tacebrum.

A [illegible] simum vigut apud Rationales dogma, hepatis, unum esse sa [illegible] ex sanguine conflet, [illegible] Græcos, & Arabes [illegible] & [illegible] quæ [illegible] [illegible] [illegible]

[illegible] arteriis nodo vincit, & iterum cutim confu-
[illegible] per communitas radices ascendere

[illegible] eadem sanguinis in jecore productionem arguit, [illegible] nus cum *Thoma Bartholino* negat necessarias venas hoc [illegible] orum cavitate hausto turgere, quia unde venas ebibisse credit, cum vasa absolutè in ipsam non ment: quare succ[illegible] tienes partibus inferioribus derivat, & licet ejusde[illegible] are nequaquam chylo accidat, sed sanguini tantùm.

[illegible] tenon in re[illegible] cava, & [illegible] unde [illegible] in majoribus venis obse[illegible] anus; quòd autem inject[illegible] ex legibus circularis sanguinis motus: quoniam tamen sing[illegible] um vasorum rete ab iisdem emanante irrumpatur non absimile [illegible] demus in arborum folijs; [illegible] Pa-
gines reticularis venæ: & tandem in ramum venæ arteriæ[illegible] majoribus recolligatur.

CAP VII.

An bilis in jecore secernatur, an separetur.

E[illegible]

[illegible]

[illegible] membranarum contractionem & excretionem observa[illegible]
[illegible] transfudationem a cœna[illegible]

partim per porum [illegible]
a terato, & sanguinem e mente [illegible] e commixta, medio hepatis parenchymate
supplementum coctionis hepatis impetrat, sanéque hunc sanguinem cæteræ
massæ tendit. Hujus separationis alimentum ex unico torumne, quo cytis[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
tiam formica, justa adagium, sua polleat hue[illegible]
[illegible]
bilis di cussa excrementi natura, coctionis condimentum, peculi[illegible]
statuitur, ad edendam enim perfectæ coctionem, satem cam[illegible]
[illegible]
[illegible] is poro, ventris turbationes, crudnates, & indigesto[illegible]
[illegible] succedunt.

An verò excogitatum [illegible]ckii, quo bilis generatio [illegible]
fluis membranis ponitur, naturæ operibus, simulque rationibus contrari[illegible]
[illegible]
[illegible]
verto in assigna[illegible]
branarum porulos appositum[illegible]
huic muneri ex natura sua perpetuo destinatas[illegible]
[illegible] er conspicitur, quare hæc ratio a confirmatio[illegible]
[illegible]
[illegible]
[illegible]

& vesicula, ut accepit ab ureteribus, & urinaria vesica, recollectam, ad tempus

cum vi repulsa est.

Nec [illegible] ulcus, [illegible] & [illegible] ulcus, [illegible] ulcera
[illegible] ulcus [illegible] ulcus [illegible] ulcus [

carnosis hujusmodi intestinis emergebat.

licuit perpetuam videmus acetum pauci vini infusione.

Huic positioni obstat in sanguine adesse fere omnia, & præcipuè bilem, ea ta-

va, sed talis à sanguine erubatur, sola, organorum

ut de vino, & aceto commixto verificatur quoniam tamen non

& indiscriminatim, impetu quodam per angusta quædam vasa sanguis, qui rectum omnium confusam congeriem dicit, per singulas corporis partes demandatur, & perpetuo in ipso celebratur [illegible], quæ in confuso quodam motu sese invicem impedi[illegible], & naturæ occurri[illegible] in designatum terminum: & quoniam continuo circularis ille [illegible] per separatur, ideo ex reiteratis vi[illegible]bus tota sanguinis massa a seroſis [illegible], & [illegible] purari potest absque eo, quod simul coeuntes urinæ [illegible]

[illegible] struo, hæmorrhoidalique sanguine, eandem eandem, omni [illegible] modo unde quaque simili, deducere possimus, & [illegible] ticuus, & alias emulgentis, peculiaria [illegible] quæ [illegible] suppressa, mor[illegible], dubium fame[illegible] [illegible] [illegible] [

Bilis sequ- ſcus, quod

peculiare penu paräſſe

adaptatione variari, ita ut hæc materia, debita amiſſa forma, ceu-

rum exhibet: in his etiam utplurimum he

ter laborat: unde ex his omnibus ſuſpicari poſſumus, bile à je-

an chylo ſapores. Probabile enim eſt, triturato jam cibo,

& inſuper à pancreatis diſſimiles affundi ſuccos, non diverſa

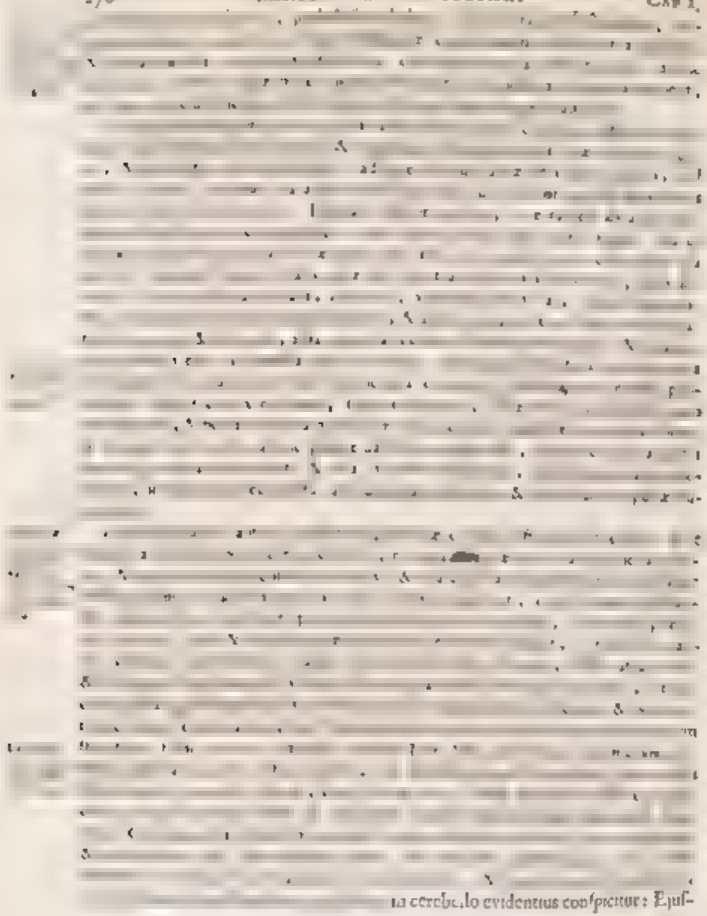
DE CEREBRI CORTICE.

CAP. I.

Quo ordine cerebri substantia.

[illegible] imaginatum abdita rerum patent, [illegible] pus est conatibus, idem etiam in cerebro [illegible] gine, velut [illegible] re sacra, [illegible] di, circa quam plures infudasse co[illegible], & tamen ex ejus [illegible] penetralibus adhuc ignota mortalibus, eruenda lat[illegible].

Corticis substantiam ex minavit novissimè *Vie[illegible] famoso libro de cerebri anatome*; [illegible] neris corpus esse docet, in quod ex angustioribus vasorum [illegible] alembici canalibus, liquor instillatur, qui proprio fermen- [illegible] & [illegible] corpus [illegible], [illegible] nua magis depurata evadit, & varios motus per fornicem, callosum corpus, ante- [illegible] actus ejus putat, unde multiplicibus sinuatis, & [illegible] Doctissimus *Bracilla* [illegible], quam eleganter conscriptam [illegible] à fero concrescibili, ità tamen, ut ena[illegible] implicitam, à me descriptam fibratam [illegible] A [illegible] quibus quat[illegible]



in cerebello evidentius conſpicitur: Ejuſ-
dem

est, insignis ipsarum portio latitat, & præcipuè sub p[illegible]ipio, mox earundem glandularum etiam particulæ int[illegible]us, mediumæ cum nixæ conduntur

p[illegible]ces sobos divisam coagmentatæ exiguis alias minoribus, veluti [illegible] & [illegible] [illegible] & [illegible] [illegible] & [illegible]

dum exorti à glandulis, & per cerebri corpus protracti

ve fortasse dic[illegible]ae erit alia, quæ [illegible]em præclarissimo Viro adduntur, fol-
[illegible]trare, sed ab ea omni, secùs
[illegible]verum sit nervum, ut cerebri
proprius [illegible]bintrat, inspias liquorem cru-
[illegible]dularum condito, qu[illegible]
[illegible]x diversis liquidis appul[illegible]
[illegible]portio, quæ in cerebro sep[illegible] &
[illegible]detur, ut peculiaris fucci fig[illegible]la-
vel saltem ejus ope glan-
[illegible]te, adeo non est im[illegible],
[illegible]s, & privatas gratiosas activari
[illegible]tur separationis opus, quod per-
Illud verò, quod in confirma-
[illegible]ulas uniformi constare parenchyn[illegible],
[illegible]um glandularum attingeremus atomum

[illegible]is desiderari
purat: cere[illegible] scilicet medullam n[illegible], sed peculiarem succum
pro sensu, & motu universo la[illegible], unde ob extimam ejusdem dignitatem, velut
[illegible]n, ossibus undique circumseptum fuisse. Etenim cerebri portio, quæ
[illegible]
[illegible]
[illegible]

CAP. III.

Exponuntur Cerebri Vasa, eorumque progressi

[illegible] particulis ad vitam, vel sensum destinatas. [illegible]las pro- Arteriolæ

[illegible] ngula quæque glandula utr[illegible]
[illegible] s fimbus irroretur. In perfectionibus itaque [illegible]
[illegible] uea vasa extrem[illegible] corticis glandulas, quibus cereb[illegible]
[illegible] laceratur, vel iudem fectis, rubra adhuc punctæ à vasculis erumpentia emergunt.

Nec forasse diu cogitandum erit de proprio, exteroru[illegible]ue vase, ut firmam per-
[illegible] florum testæ vicem ge[illegible]
cerebri cortis partibus accidit.

Structura fibræ nervosæ

propaginem consimili methodo natura molitur.

bus, aliis radicibus inhærentur

Nervearum fibrarum, & conglomeratio in cerebello ramosas arbores referunt, à *Cortice*, & aliis denominat, quod etiam adamussim in cerebro a natura tentatum reperiox si cerebri gyri cum contento cortice per transversum secentur, vel lacerentur, consimilis arboris figura cum continuatis ramis, appensaque cortice deprehenditur: hoc facilimè ibi occurret secto toto cerebro transversim, vel ejus singulis partibus.

Arboris figura in cerebri substantia

Fibrarum

Vasorum

Vasorum de

I [illegible] ...ur ...ur ...ur

& quoniam glandularum hæc est constitu, q admodum in palat
tribus evidenter experimur, ut ex irruentis per
r ous particulis tenellæ ipsarum structuræ vis infer
justo, vel lentem actior per excretorium vas cr ato humoris continga deriva

o humorales, dicimus, à venosis sacculis ortos juxtà illud de loc in ho que mox-
quam bus à venis ortus, levior est, quam qu ut omnis una cum humore, qui in
tus suscitari potest, ut in cæteris venosis contingat, in quibus q

hæc glandulæ, & insignes assurgunt excrescentiæ, quæ a sinu
fortasse ab extravasato nerveo succo, qui,
bus in nervos tur continuata semi
tur per venas, quare hbe noti succus, à
vehiculo, exterisque facillime concrescit, ut passim etiam in anis partibus ex in-
uentibus copiosioribus determinatæ nat æ particulis diversi contingant tumo-
res.

Ex his nunc ea, quæ à solertissimo *Willisio* de sensuum interior
sensalis structuræ deducuntur, lectoribus rationique consonent,
Spirituum motum ab
cerebro, eumque ipsius cerebri, in eadem ejusdem fibrarum quadam esse
effecat per eandem duram matrem apponas promere unius corporis
quo sensus edantur per nervorum vasculosa
reflectertur usque adeò angulosas cortices, a
que perpetuo attingat, in quibus unigenitorum, sensus communis, & memoriæ
sedes

Apud etiam, quod additur ab ingeniosissimo Viro, structuræ &
peculiarem esse texturam, quarum altera ascendat,
appetitiones ascendentes percipiantur, & deorsum motus
parallelæ in ventriculis deductæ
pete autem elongatæ medullæ concurrentes non diversas
sed
corticalis glandulosæ exortæ
bræ potest
conspicua, atque mira sensus communis, & motus localis, primos
sedes

Nervos
vos
Eorum
constatam observavimus, accedentibus sanguineis vasculis,
cipiendum, simulque in singulas cerebri partes
hæmatinum, adeò omnes nervos è cerebro, &
ut separatum in proprias
deorsum
guinea vasa, quibus ferax materia suppediteret, & reindum
ut
glandulis, venarum ope revehatur ad inferiores partes.

DE RENIBUS.

PROOEMIUM

Tam variam [illegible] esse [illegible] ut eorum [illegible] tandem [illegible] [illegible] [illegible]

CAP. I.

De communi omnium partium substantia.

Ut[illegible]s, & involucris habeatur passim apud Anatomicos, peculiaria tantú[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

spuria adipe intimè hærente replentur. In homine, ainsi[illegible]

[illegible]

[illegible]spunctus, conglobetur, & in adulto etiam perpetuò interiùs hujus d[illegible] permanent indicia, di[illegible]ntu etiam indagine asperam, & ulteriùs seminivisam observavi hujus superficiem, quod tamen, ut clarius pateat, a[illegible] rum renes sunt excutiendi, in his enim lobuli quidam mul[illegible] interdum emergunt

[illegible]

[illegible]

[illegible]

[illegible]ùs brutis. & in ipso etiam homine collectiones [illegible]fe[illegible] insignes conspicuis foveis in a[illegible]quibus brutis circumscriptæ, tandem interiùs peculiare[illegible] &

[illegible]

[illegible]

[illegible]

[illegible]

hasce amplexantes, interna etiam propagata vasa, dum extimam [illegible]que

[illegible]

[illegible]

[illegible]

[illegible]

ntur. In canum, & fuinum renibus, ubi in concava

to tramite per renis dorsum subtequ

us pelvim propagantur; hoc quand

renum superficiem excurrant tortuosa spatia, & fine

lescribuntur vasorum diversi rami hinc inde bifurcati, varius ex
nullo hq re, & propulso etiam sang ine excretur; quare in human
verum sectione exercitati asserunt, renum c etenim
ruber frequentissimè clarior, & splendescens ab ipsis ci obscu-
& non rarò sul
nis proventus, vel ejus carentia excita

Cap. II.

De exteriori renum

Illu que renum artificiosa pandetur
ienarum ramabimur, hinc etenum
e occurrunt, extima ipso-
vasorum ramis usque ad extimam peri
n saturatior redatur, & varias hinc

lus ut papillam desinat, partim
albi, partim lerur, ut homine
est ejus substan
dinitur ejus color.

ecombus n quivis à papillari corpore continuæ, & rectæ
am superficiem protractæ deteribuntur, ex qua po
ta nobis intimatur. Quæ tamen sensus nobis longa, & mul.
, non eandem omnino mihi suave

fus, ut saliva

um, mox seorsim summis digitis detergas, ità enim hoc
veros habebis progressos, &
sa usque ad extima , hoc ap
rint, mutuiq

ingere, quare non est mirum, si
corpore
em, licet integra ulterius
ingat irregularis lacerato, e quo novam vi
ta enim ar l lacera vasa disrumpuntur, quæ novam partem

Tota rem a partis eſt obſeruare hic

[illegible] peſſe [illegible] obſeruare

A [illegible] ſam, [illegible] [illegible] [illegible]

[illegible]

determinat extremæ arteriæ, unde q[illegible]
ratio tamen sufficienter evincit.

[illegible]

communiter observatur, unde ad [illegible]ndulas cum cæteris vasis, ut in consimilibus [illegible]
glan-

glandulis recte,

R[illegible]

[illegible]

cum autem hæc oblong[illegible]
determinatæ humoris ex[illegible]

CAP. IV.

De reliquo substantiæ renum usque ad pelvim.

[illegible] valorum productionem usque ad
[illegible] as, in pennatis
[illegible] est [illegible] as na[illegible]s

[illegible] &

[illegible] &

[illegible] ous desinunt, in aliis autem renibus, ut quorum extima superfic[illegible]
vel eorum obscura adsunt vesi[illegible]
scentes quasi papillas conspiciuntur.

[illegible] &

[illegible] re in evidentes, & distinctas papillas, quæ in pelvim[illegible]

[illegible] per propria [illegible] [illegible] Quelli

quam per poros in pelvi exc
vi appareant

hujusmodi papi ndat corpus, nec protracta vasa
am acquirere na , seu ingenitam sortiatam, etenim
equaliter congrata
am deducta reflectuntur ad latera, ubi non longè ab extremitate
in quodam cavernosum observatur, in quod fi
desinunt, unde compressa papilla urinam totam inde promit.

cum mole polleant, videtur impossibile, quomodo capillares
contra urinæ vias in papi atibus meatibus aliertas; etenim
nam nequaquam papillari corpore, ut cribro, separarè
tamen non potest per hoc, veluti per extrema urinæ ductus
cum sit ipsorum tantum congregatorio, & hiatus, cum eva
fines, exiguas autem arenulas & calculos excernat ab hujus
quamodo ipsorum exigua sit moles, cum urinæ vasa manota sint, & conse-
quenter exte , & hujusmodi urinæ
ductibus jeiunet, & advenientes
membranam, & ita corrupta nonnisi renum caro observatur

Tota enarxia hucusque renum portio sua habet fi
ramis propagata, & deorsum protracta hederæ similar,

guine, ut major coercita sanguinis copia hæc fabbit, quàm in carne
autem vasa observantur prope finem versus papillare corpu
hujate, & vasorum densitate membranem, seu nervosun ur, & reptus
urinæ vasorum collectionem, hoc nequaquam in sing

Cap. V.

De Vasorum Propagine, & Pelvi

quam plures nervosè oppugnarunt,

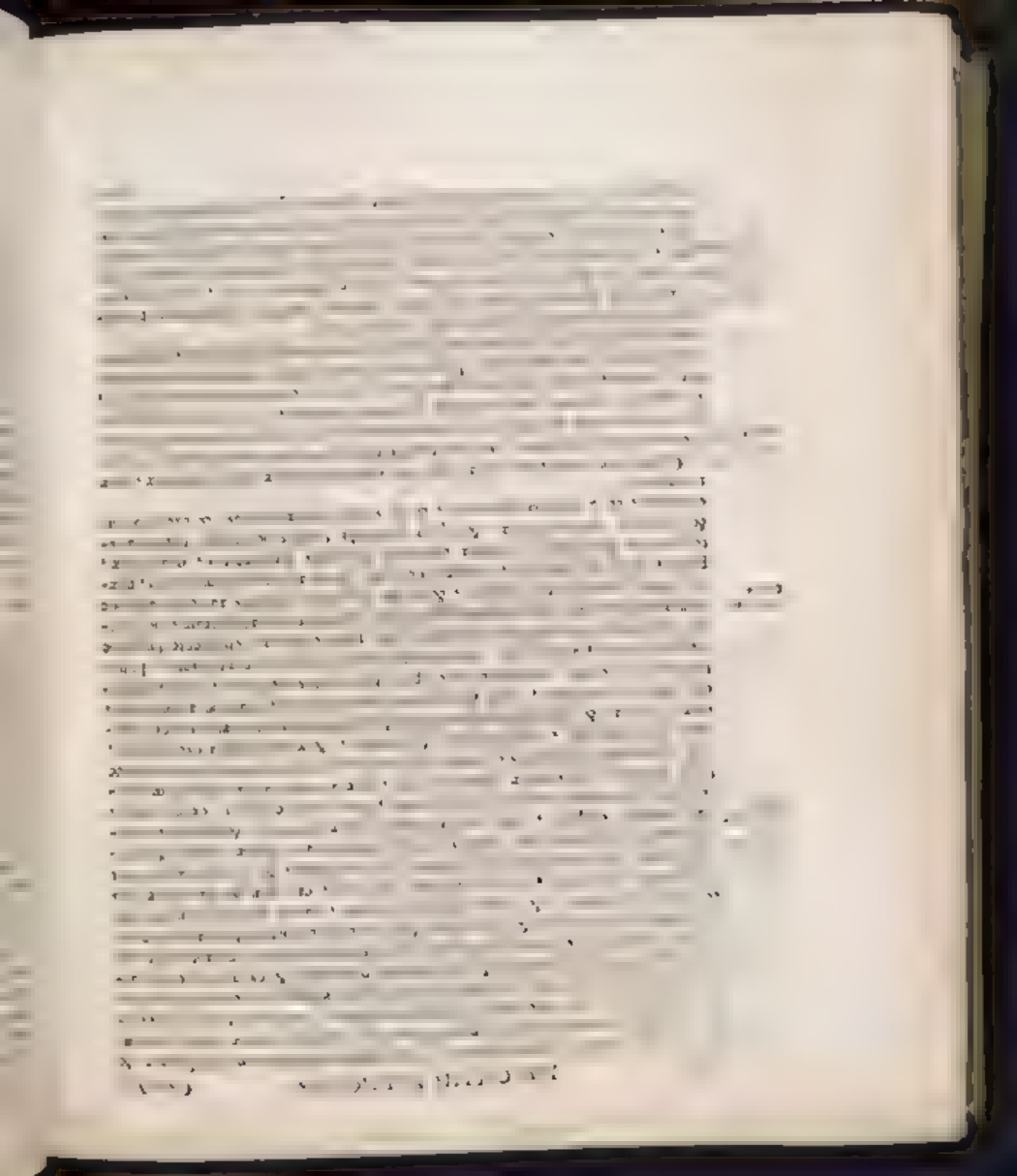
nis, & venis excitatas dixerunt; à pu[illegible] etiam appendicibus in arcum

cujus extremos fines nunquam ingere potui. In cæteris animalibus, ut in pecude, [illegible]

CAP. VI.

De Renum Usu.

[illegible]



pelvi recep[illegible], adhuc conservatur, quare ex diversa ferositate per r[illegible]bas mu-
mas gla[illegible] ul concrescendum pilorum promovetur gene-
[illegible] etiam potest, ut [illegible]rdum portio concrescibilis sen vel
[illegible] m meatibus exc[illegible]t, & dum per excretoria vasa in pelvim de-
crescendo teretem h[illegible]figuram acquirat. Idem dubitare possumus de fau- Pilo-
[illegible]

[illegible]ro fixantur, unde de facili in vasorum urinæ arctis cubulis in pilorum for[illegible]

[illegible]nis particulæ cum urinæ face comm[illegible]xtæ, vel
[illegible]am tunicæ, quæ pertranseunte tero erodi possunt,

[illegible]s vermibus, & ut plurimum calculis afficitur, si Renum ve-
[illegible]tacea; fu[illegible]usque particulis ex illis unà a pelvi irre- mes & ca-
trahitur, lapidis [illegible]omovet; facile namque est, ut pertranseuntibus o-
[illegible]t, & cont[illegible] ex cohæglobatis pluribus huiusce particulis lapis
[illegible]dinem subiecit, ut continuò aucr[illegible]

[illegible]ribus armat, quare in gonorrhœa lumbis An seminis
[illegible]nea appon[illegible]tur, ipsique libidinis sedes vulgò creditu fuere: hanc diu so-
[illegible]tiam vaso[illegible]
[illegible]men a renibus, ejus[illegible]

[illegible] est seminis particulas ex appulsis ad testes succus separa[illegible]
[illegible]arteriis rudem saltem, & [illegible]
[illegible]vi viscerum reddatur sanguinis massa, subsequentium

[illegible] molam, vel abortum prævivæ dis[illegible]
sed probabile insuper est harum particularum de- Sem
[illegible]narum particularum decidiam, vel à toto, pote
vel à sanguinea massa[illegible]

[illegible]usmodi exactis salibus
& [illegible]o perpetuatur, tumularum, & dissi-
[illegible]brica separantur, itadeque re-

DE LIENE.

PRÆFATIO.

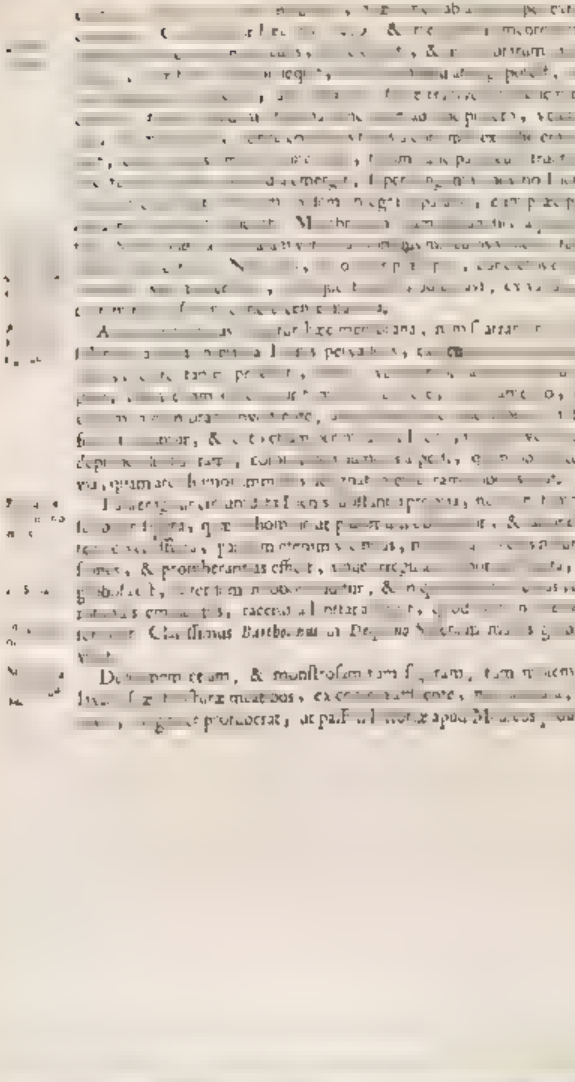
CAP. I.

De Tenui Membrana.

Membranarum generatio, proventus, & usus ad [illegible] est, ut non tantum singula corporis membra quoquomodo [illegible] membranis ipsis donentur, sicuti in tumoribus præcipue ac- [illegible] tur, vel in omentum continuatæ alternis elongantur.

A [illegible] subortis erumpunt.

[illegible] tibus per omentum deductis in receptaculum unum



C A P.

CAP. II.

De Fibris per Lienem dispersis.

Tantum, quibus universus Splen supatur, tantus est proventus, & suita in cano, ut abunde naturæ solertia in custodiendis, faciendisque prop ira, ususque apud Anatomicos cons s vasculis habuerint innumeram ramorum soboles experientia conati sunt firmare nonnulli Clarissimi

insvehendo materiam per totum parenchyma n Liene succedat, vaso

hendo succo esten esse tenua, & va da, à venis . vel arteriis orta demo

& interiori Lienis membrana, & per transversum pro commune involucrum vasorum per med s. Non dem servant planum, seu ideminidem sibi occurrentes f næ; vel fibrularum, seu capularum part us, & rete, & dam membranæ a s velut ramis in ipsam C minoribus aliis fibris per longum du- plicationem, ramorumque produ latum extensis in membranam desi- dembranæ p que capsulæ propriis staminibus c s structura conservetur , quæ arcubus ad robur subte An vero ine membranam absumantur, adhuc tamen per aliquod sp tionem retinent: Quoniam tamen *Spigelius* observavi iorem Lienis membra- hujusmodi fibrarum effornatam plexu, officia en, & nt competere posse. Hinc accedat, me diu quæsisse, an hujusmodi & in determinatam partem ferantur, sicuti in cæteris vasis e

[illegible] jam relinquimus.

CAP. III.

De Vasis Lienem percurrentibus, eorúmque capsula.

[illegible] alis, ex [illegible] & [illegible] & [illegible] &

vasa examinanda assumam.

antequam ipsum subeant leva divulsione separentur: ut autem jam ingressa ma-

& imae can-
cr energeia.

vel saltem ejus vicaria, etenim quamvis in

aquipaeia
fotacthnaeia

& [illegible]

fere semper art[illegible], &

Nervi,

extra teretem mutus fibrarum
quandoque supra ipsam

rum bifurcationes sequuntur, ita ut totum Lienis corpus perva-
nosso, de quo infra, nedum amplum
excurrentes, sed etiam in reliquo l

arteriæ ram s subdivisos u
unum observavi, nervum subdi

cum elongentur, non sum assecutus.

Membra- nuculam

Hæc

tur vasorum in fasc intra se collectorum diramationem. Neque in bove tantum, sed in homine s & is evidenter patet, facta levi lienosæ substantiæ abrasio m ejudem continuatio cum exterion tunica innotescit. Non ubique sibi similis est uarum partium compage, cum sub arteria, & ner

m ulteriori progressu amittere videtur, rem que similitudinem acquirit, ta n crassioribus, & per longum sibique occurrentibus fibris m membranæ obscurent, iisdem fora ibus pervia est, ac sinus, & arteriæ per Lie diramationes sequatur, in hanc desinunt, hac exorsuntur altè impiantur ni fibrarum Lienis fines, qui per tur, opp n hanc caosulam velut in centrum dedicti, non diversa ab , quam in circumvolvente membrana diximus contingere, m fibrarum expansione absumuntur, quin, & ut ver

[illegible] tantum firmatur valorum progressus, sed arteriæ, & nervi præcipue circumambiunt, inducta velut vasa non tantum in insigni alio ductu, per [illegible] Jam

[illegible] & affuso sanguine, [illegible] Lienis substantia, ideo videtur [illegible]

CAP. IV.

De Liene.

Præcipuæ in animali corpore sunt viscera, quæ [illegible] etiam deprædicant & [illegible] & affuso sanguine, [illegible] turæ mysteria obscurant; quare toti [illegible] caliginem huiusque non detersere [illegible] Jam [illegible] Lienis substantia, ideo videtur [illegible] Lien est [illegible] dire, fœcte carnis nobis [illegible] diuto faucet colore, & subitanæ lax [illegible] letur, deinde aër syringe, vel ore ipso [illegible] & membranosi panetes emergent, Si autem jam tumefactus siccescat [illegible]

tepenes, ita ut omnem eximat dubitationem.

parietibus cellularum descripta, interdum verò angust

Circa hoc unum adhuc mihi dubitandum remanet, an

contiguos
linus,

[illegible]

substantia talium concamerata dependere.

[illegible]

A quanam parte exortum ducant membranosi [illegible]xtes, quibus concameratur * Renum membrana

[illegible]

excitam non incongrue alias dubitavimus.

[illegible]

quàm melliora. meliora quam

CAP. V.

M

opositumus, idcò in hemi fl ctura alia addidit non di.fi-
parenchymatibus. In Splene igitur glandularum, vel ma-

habent, ut perpetuò observavi, album, & licèt l a vasa injecto

mbranea videtur, sed multis, l
oculorum actem effig t, conjectura
is concidere videntur. Numero copiosissimæ, & ferè innumeræ
is universi hemi cellulis,
statuitur, in

in defuncta puella observavi,
cematim dispersis totus scatebat. In piscibus a

observâsse *Charcharia* nem, quem ut diligentiùs s
a, asservantium enim incuria pul
is occurrit, de-
brana, vasorum, & fibrarum f , quasi paral clos
s quasi globulis conflatum v fum intuen, ni
e volut, ut hi, quibus ad man esse por
t, etenim fortasse in hoc a h simplicior, & de
afus.
ndulas,

omnibus

[illegible] gium relinquerent. Omne tandem exemi dubium, dum in el[illegible] cujuscunque animalis sanguine, eandem conliguationem deprehendi, cor[illegible] enim colore in globulos, pomorum figuram redolentes, q[illegible] [illegible] [illegible] [

omnium morborum frequentem passionem.

Vtra alia compar.

Nisi aliorum syndrome implicarentur. Hinc additur, lienem vitiosum esse, quod, ut probabiliter suspicor, aliarum partium vitia compatitur; interdum enim determinatæ nostri corporis particulæ, vel etiam totius vitia, lieni communicata labe, pro-

brevibus exarabo.

In cane adhuc tenello excitato in sinistro hypochondrio vulnere, erumpentis lienis, & appensi omenti sanguinea vasa ad lienis portas filo innodata sunt, mox

In cane adhuc tenello.

hebdomadas ad pristina

quo remedio

cibum ca-

[illegible] copiosè dispersa integrè florebant, & sanguine [illegible] referta: ramus splenicus patens, & secundum naturæ leges erat, [illegible] tos vulgares quosdam usus.

[illegible] de humoris [illegible] separatio.

[illegible] & cellulis, in continuatum splenium ramum exprimi, qui, cum pa-

…aterem in jecur visor invenias, arcuatum vi… tur in vas breve, quod ab ar… …nem impetu revehat, insinuari posse, & hujus …ossibilio… …experimento explora… Ligato … …; ità ut propulsus fa… s à liene reflue… …

…ruoli, ne sanguis a co… …esso vase brevi versus splenicum truncum … …, …is per continuatum vas breve in ventriculi fundum, sed, …ejusdem vasis in splenicum ra… …, demerebitur, donec, so… …, & succida interim permanente vasis …

…o spiritu à cavo hepatis p… …n dubitari insuper potest: … est per san… …contrario motu, & sua… cella ferment… …here possit. Intup… …n deducatur, & in quibusdam pe… …culo, & proximior est hepar; no… …; solidorum etiam per… …us, & cochionis cauta, …

…ogitationes, quas prom… …innumeris con… …ceram observantur, taliter appellare liceat, ex dictis patet … …em collectionem in liene co… …ic hanc parùm facessere negotii, cùm in maxima quantitat… int. Hanc con… …

…Licet occurrant arteriæ, quæ totum alienem per… …as glandulas, cùm … …mercium inter glan… …fice ita arcte … …bi Natura ab …a separat peculiari excre… rio vase ut… …iene, cùm huiusq… hujusmodi defluentes; … …. N… o arteriis detero… …dd… …e labor u… …venas est propulsura, cùm aliàs hæc fit con… …, …beto nervos occurrere, … …pond… quæ n… …a, vel analoga quædam co… …

cutus involucro gra-
ne adtenuas, ut ab
separatæ
rabere videru
hiter credatur. Superiori anno, ut d
& excreti succi

hentis glandulas hquorem deferri, cui etiam aliquid ner
supervacaneam videri Naturæ industriam, separanda fe
succum, qui mox in venas est defecendus, etenim mult
inter communionem consuetam arteriarum, & venarum, &
luantes, & venam spleneam, cum in arteris & ve

orte excretoru vatis, simu que pro miscela officinæ vices præstare

ratibus minutus propriæ structuræ, ut commigat in sin
membranæ sunt, cum scissæ concavitat
& cribratus humor ab
sinus, &
an vero venarum ope
landulas attingant, diu dubit

m exhorriet venarum fines probabiliter credidi, hoc

as novam miscellam miscisceatur, ut sensim postea in sp

nter tumores in liene

am, nam sanguis, qui in

quaque pulsatione ab extremis arteriis propellitur, per contun[illegible], vel per

[illegible]rantibus adja-
[illegible]um ob faculum

primeretur compressione respirationis, & miscu[illegible]
[illegible]is visceribus accedit.

turam, vel fa[illegible]
pulsi hac cont[illegible]at ob successivam miscellam, & motulam, quæ perpetuatur i[illegible]

[illegible], &

miscui humorem, ut lux aliqua

[illegible], &

fiat. An acidras illa, quæ primò occurrit sit soboles

accidit. Pluribus misceri, spiritu nempe vini, oleis, & [illegible]iversis etiam fa[illegible]bus, nec quicquam novi exeratum vidi; quare ex adduct[illegible]congruum fortasse est con-
ferre in exarato sale, multum sulphuris, summequ[illegible]
[illegible] compages solvatur, & spirituosionibus a[illegible]is libertas, & c[illegible]

[illegible] mis, qui plumbo otio, & experiendi affluunt peritia, [illegible] evibus hoc complexus negotium inchoatas med[illegible]

[illegible] n per proprium vas scilicet per splenicum ramum, n[illegible]

[illegible] hepati præsset, [illegible] od præ cæteris visceribus primum occurrit, & in quod peculiarem la[illegible]

[illegible] e cavæ truncus, in quem immediate exonerari pot[illegible]

[illegible] probabile tamen, recolligendum puto, bilis, seu humo-

[illegible] affundi-

[illegible] ...nitus a pecore prodeuntium intesti na porus ba[illegible]at, cujus extremitati duodenum; b[illegible] intervallo ab hepat[illegible]di foctura, proximo in[illegible] ba[illegible]ieus porus a pecor[illegible]s superiora, grac[illegible]escit autem versus intestina, & [illegible] fæpius repetitum, dum fe dice[illegible]

[illegible]æ hanc naturæ pat[illegible]tiam operandi Nat[illegible] quæ velum extensum, & cone[illegible]m à conspicuis valis, in plum patens[illegible]

[illegible] & tandem membrana totam hanc oris concamer[illegible] fcatere glandulis, à quibus mucosus succus exprim[illegible]s unus fauvam [illegible] [illegible] [illegible]

in eum & ... copiosè confluere, vel per arteriam ... dare, & arteriam ... eriosus cavernosis congestione ... ve ruptione facta, Asthma excitare.

... Vagatur, & reconcentratum ... apud tenerorum ... fatum, & ... vem, quæ ... ebrosum Asthma laboranti ... abundat, ortum trahit ... per ... vitiosa ... sione detinente ... fluere ... sanguis ... quæ ... & ... antur ... tus, ... ut ... inducta ... masse ... e ... ongrua ... dominante ... per vasa excrementorum excernantur, quod licet probabile sit, non ... tamen ... temperamentum, etenim, ut ... quæ ... mor-bis ægrotantium ... cera secare, vim non ... hosa ... ardentes, ita ... compactior ... & angusta ... vasa ... ctam ... ut ... ant, sed ... , & ... primum ... à ... humore efficitur ... , & ... in cæteris ... gerentibus, vel fermenta ... scentibus, quæ ... , os, & pancreas, non ... tum ... ut ... , detectus ... , & ... ctas peculiaris ... fiet, qui secundum indigentiam ... debet, sed ... rectum, & ... proportionata, & copiosa ... separatione, seu congestione ... malis functiones ... antur, ut contingat ... cæterorum ... , & ... bus, dubitat ... meo judicio locus ... , ... nere ... exarato-rum ægrotorum ... Liquoris copiam nequaquam ... , sed vel vitio proprio, vel ... valis, & ... æ ... energia ... plus ... interdum congeri, ... ipitesque ... , cujus ... tandem copia, & ... animal ... datur, quod ... in ... , ... , ... sanguinis ... as, ... potest. Paucula ... de ... acrius ... urgeas, sed quæ ... inventa sunt, detege, vel ... perfecta ... , hoc erat momenti. *Hippocratis Sententiæ verum, ... opus esse vide ut*

In ... ...

DE
POLYPO CORDIS
DISSERTATIO.

Orbosas constitutiones, quas Naturæ ludentis, vel vi morbi ab
quenter in animalium corporibus excitatas miranu
plurimum lucis pro rimanda ejusdem genuina op
credidit, quane
. & determinatam inclinationem demo
strant, quæ in compingenda animalium mole elucescat, ita
[illegible]
[illegible]
[illegible]

rotundat; quo casu etiam productæ per vasa

admittant, quod etiam in cordis auriculis frequenter observatur.

vantur.

A quanam materia excitetur Polypus obscurum

Polypi ma

concrescens

tomenta l

ultimò fese obs

sanguin

mihi occurrere, licèt levia, proba

bus pro Polyp

e est communis substantiæ mo.lus, & color con-

fimilis,

similis; assignatæ insuper materiæ, venis quibus sanguis co

enim licèt alluta purpura apparentes nostros fallat oculos, si manu plectibus tamen bus aqua com u factis tunicunculæ illæ impli tæ lecumbentur, impensè tabescab , vel nigrescebit, tract ris albidæ , quæ secum in es particulas rapit. Et si pu

e speciem exhibet. Hanc verò reticularem sanguinis portionem cum innatante c uta candem sortiri naturam, quin & naturam probabi er ib

e crustà alba, & dentà innatat, quæ tamen concrescibili fero

plicatione tentatos, & sanus exoriatur

vitus, qui coercitis rubris atomis turgent, & inficiuntur, & in quosdam etiam

forum coercti cruoris corpus humare, & potiori plum donare corp

s illis sanguineis

e sunt intercepta spatia, æ color subal

tandem amplores

ea luofa

, & ovi albumine observamus. Non rarò elongatas quasdam

quas interdum absque microscopio licet intueri. Di

culos, fibrosa albáque sanguinis portione

et amsi longo rem natur, cum novi plexus, majorque perpetuò sub-
alacedo.

tas il ustretur, & pr rem ipsam attingamus, Po-

igro pollet colore, tota aqua ab

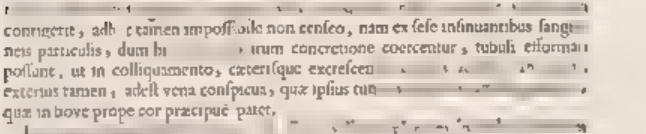
sanguis m
dextro cor
dis ve
a
sinistro

roximi occurrunt, ex ipsorum scabritie, & rami

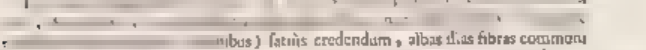
aqua alioquin clara tartareæ quædam particulæ tu-

rficierum simili, & mutuo contactu detentæ, cognatas
præterlabentes ità detinent, u ovus circunductus tubus extendatur; unde oli mi
rum, si pulmones, & caput etiam pervadere possint tati Polypi, sunt enim vel-
uti novum s dideo excavatur, qua ex sanguinis motu canalis
conferea uctibus accidit, & in biliario ipso poro non
cujus inter us cæculosis lateribus tartarea affunditur crusta,
fistulam de etransseunti bili permittit; & sicut in lapi
zahar, & consum cerdit, ut ex multis superpositis veluti lam

contingere, adh[illegible] tamen impossibile non censeo, nam ex sese insinuantibus sangui-
neis particulis, dum bi[illegible]rum concretione coercentur, tubuli efformari
possunt, ut in colliquamento, cæterisque excrescen[illegible]
exterius tamen, adest vena conspicua, quæ ipsius tun[illegible]
quæ in bove prope cor præcipuè patet.



[illegible]nibus) satiùs credendum, albas illas fibras communi
[illegible], cum Polyporum caudæ, quas observare Tefticu polypo
porui, scissæ reterant nerve[illegible]m fasciculum, his enim ab invicem sejunctis, pi
[illegible]anscuntis sanguinis fibrosæ particulæ a[illegible]rari, & hærere possu
[illegible]atenduntur tunicæ, quæ ex p[illegible]ranscunte sa[illegible]
re arteriæ aortæ continente tunica talem configurationem, & adap[illegible]



sere eadem incedat methodo. Ità memini ferream acum extra gallinæ [illegible]
[illegible]em bino membranoso, hocque valido invo[illegible]
itam vidisse; & dubitare insuper possumus sola materiæ ne- gu
[illegible]
[illegible]usdam tumoribus pulmonibus, hepate, & aliis exstatis circumvolutio- cum
seu multiplicis vesicæ, quarum amplior minorem co[illegible]net, & ità succes-
[illegible]tumorum, conglobatio[illegible]

...bilionibus, & impetuosionibus particulis motum impertiat,
...m congrua societas conserventur. Hanc ferm...
..., vel saltem juvare aquoribus, & saccis separat...
præcipuè conglobatas, ex q...busdam exaratis super...
...t. Postremò fas est cr...
...n, sui...
...la, & ad volutation...sfoc...no conc..., assidu...
...oc assequutus videtur Acutiss...le Vita, dum
...habitum in sanguine agnovit, non ment...
...m adhuc cruore, aeri, & salsa quadam mordacit...
...rè fluant, reliquum-
...s cum sanguine
...es ipsi prop...
probante est pulmones, cor...ala quædam, quæ antiquitus brutalium animarum
...s credebantur, crebrat...facta pertranseuntis sanguinis commiscere, inde-
que in proprias vasorum plexibus deductorum succorum ar...nem, agitatio-
...
...taci lime exc...tan...mpedita, vel vitiata hujus salis effi-
...os Viros censi...ne temporis copiosiorem nitri p...
...tim miscen, q...r, & concrescat, quod apud me
bium est, quoniam in cane, nec admodum ro...
...m ad uncias fi...
...n, cum adhuc...

...bosis constitutionibus Polypo...
...re, & compositione rudre...

[illegible] Polyporum tam [illegible]s cerebrali est causa, ut ab indicatis [illegible] crentur, cum pateat, in quosdam [illegible] epotis venenis, in [illegible] mis ex aeris prae[illegible]ntia, [illegible] his Polypos produci, quo casu probabile est, habitus, seu peculiare [illegible] ruptis viscerum fermentis sanguini miscet, qui pertinbata ejus [illegible] novam solutionem, & attritionem sanguineorum particularum, [illegible] nexus quosdam, quibus [illegible]ilbarum horarum fruitula sus[illegible], & [illegible] [illegible] [illegible]

DE PULMONIBUS EPISTOLA I.

PRÆCLARISSIMO ET ERUDITISSIMO

VIRO

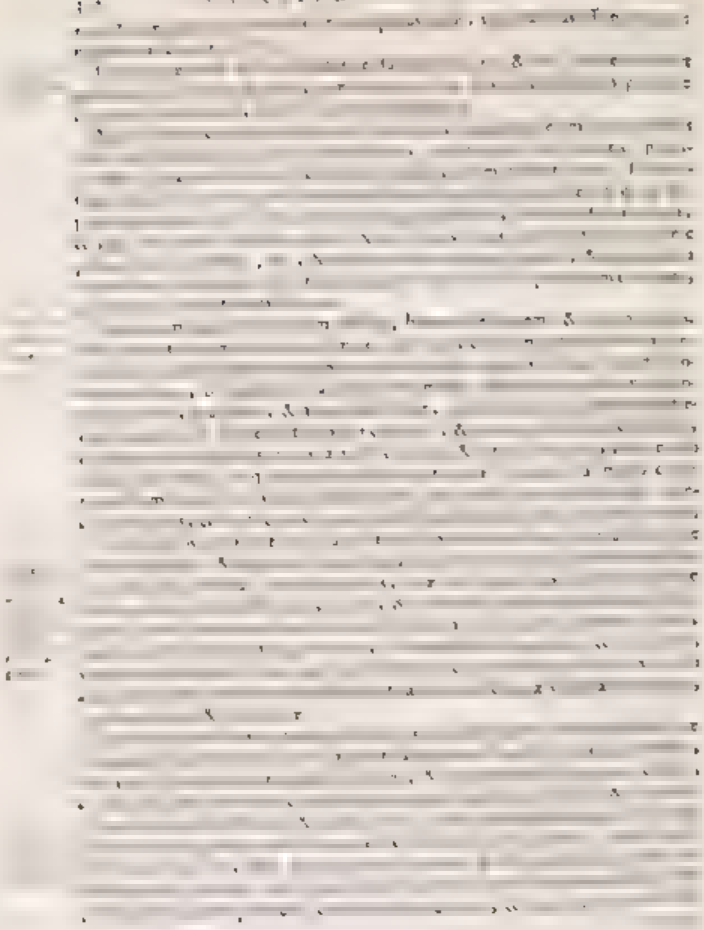
IO. ALPHONSO BORELLIO,

Pisis Matheseos Professori Celeberrimo,

MARCELLUS MALPIGHIUS,

Medicinæ Professor Bononiensis, S

…nus in eodem fecto per medium pu…mor…
…nores & minus conſpicuas; …
…gunt orbiculi, & in fecta qualibet parte foveæ, & ſimulac…
membrana …
…
…aq…
ſanguis …
…mato per…
chicam, …
…
…
…



morum lobulorum; eadem quoque ratio deprehenditur in glandulis lateribus asperæ arteriæ connatis.

totum

subobscure vocatur, minus facile tamen, & summa cum ob
eam colli ut canis minor, sed gracilis, &
nobus, qui compre e facta
net ductus asperæ arteriæ, item propagines arteriæ, utpote
que omnia cum adjunc m dab
ne sensus est levi cum

diante evidenti trunco in principio ejusdem lobi, deinde nodo

ibus vasculis ramorum arboris ad tactum, vel si lubeat

A

n interd

tincta cum levi spuma, & ex quacumq

ieuri naturalis via
sanitatis statu ass
, & humorum mutatione regias
hydropes, sanguinis expuitiones, phthises, aslamata, & e

De pul o plura ab antiquis h
& præcipu

arcerus usus i gine fecerunt, & ex his, q ctam, prol liter credam
natura fuoretactos esse ad

duplici parte comprehendi
m lam, tal ba scil cet;

as sol dicra metalla, quin immò, quod mirabilius est ex sc
, & stann
rana tribar aquæ;

Nec dubium est nis massa partes e
s, & ad tantam d it solid tatem, ut l
d cum sit sang pars rubra, quæ à sero sejuncta ita rehecca
n, licet in fistula determinatæ tamen hg friabus, portio
colore ad gn
, & diaphana, hæ
o efficiunt

ho membreo sc,
cum coagulato sero, tam ex albo, ex
itur, fusa enim, & cum sero debit
, Ex serosa, seu hae
tertius, scil rubræ, hoc expressè videmus a co

in circuitu separatur, hoc idem accidens in
nores coacervantur, & nigri maci,
, vel atra bile, firma
heres eum, ne famosus exiens à vivente adhuc ar
partes, solent dignas, vel bacillo contorrere, ex

tabrelcer. His lucem ferunt, quæ ex anatomicis circumferuntur, nam com
pulmonum sanguinem
quæ eadem est cum sanguinis aqua, quæ omni a cum in
quotannis nisi rudem fabricam, ulterius in appen
Pulmonum structura talis est, ut exacte musculi possit,

cato, quæ undique vala stipantes, du
materiam continuata per suas vices prest
uis quæ in brance
cruciculis, sibi
bus, vasa pulmonaria suis minimis propagmibus, usque ad rad
in sit aer undequaque recu
motus su ; Quin immo, &
ex rent hac cor
succo mox adducendo. Ex his, & consimilibus, ut ali as tibi
in recta quandam ra
d & cor
quorum mean
sequentibus calore,

[illegible] ioſi, & adſtantib[illegible]
[illegible] m, quo mox ſequuto vagus [illegible]
[illegible] ſtus ſe ſe ext[illegible] tio in hecticis, ubi plus juſto acrio[illegible]

[illegible] cidit, pulmonum c[illegible]
[illegible] ctoris capac[illegible]

Fermenta- Tanta eſt demum hujus fermentationis neceſſitas, & præſta[illegible]

[illegible] ex naturæ inſtituto in
[illegible] ienſtruas celebret p[illegible]
[illegible] ſes. Ex his omnibus non eſt [illegible] ſcere, cum
[illegible] nde ſetamus partieu as calidas [illegible]

[illegible] æquè neceſſari[illegible]
[illegible] nu, ut continuo [illegible] ices ſuppeditent ſanguinem cord[illegible]
[illegible] do circuitu impulſus, & vitam, & motum omnibus [illegible]
[illegible] alibi factum eſt, adeò tranſ[illegible] ſolum ſubnectam,
[illegible] s ſecto thorace, ſi jam c[illegible]

[illegible] m compro[illegible] tis namque [illegible]
[illegible] ors. & tanta d[illegible] ate pollent ad vitam [illegible]
[illegible] mùm, vel ab[illegible]

[illegible] paraſſe. Ita quo

DE PULMONIBUS EPISTOLA II.

PRÆCLARISSIMO ET ERUDITISSIMO

VIRO

IO. ALPHONSO BORELLIO,

Pisis Matheseos Professori Celeberrimo,

MARCELLUS MALPIGHIUS,

Medicinæ Professor *Bononiensis*, F.

Est inveniendis in rebus physicis obscuritas ac difficultas, at ubi [illegible] Difficultas inveniendi in physicis.

imo D. *Carolo Fracassato* Co

hecescunt, sed tensi ad an
orancea quædam vehica, quæ
s ex ordine dispositis instar cori pilos

motu, & inertione venæ, & arteriæ
ori parte tota fere facciat
ien l , sed intercipitur

luous

lios sinus, ubplurimùm
m furculo, sed
este u um vel alterum

plius puncta effurmantia eorum quam ut ea sagac
mixta occurrebant; & tanta est horum vasculorum divaricat
vena, & arteria prodeant, ut non amplius vasis ordo servetur,
ex duorum vasorum productionibus appareat, hoc rete non s
cum, prout copio-

cum in mesenterii, aliisve partibus eadem ipsa ser
bitur, venarum fines supe cum inferioribus
Homosi, ut optimè observa ssimus Folliculus.

Ut autem proposita hic e possis, & visu assequi, se
ctes, etenim hic exs ccatus servabit vasa sa
quæ tunc optime videbis sic contra horizontalem solem exposit cari untus sent
perfecteris microscopio, vel alium u tuere potens in his videndis methodum,
supra luminam crystallinam p onem pones subtus focernæ luminæ per rubum il-
lustrat
p asa tibi aperientur, eadem dispositione instrumentorum, & lumin
minis per recta vasa observabis, & ipse ex te alia comm nisci p

speculatione unum se promit, ligatis en
d , & is motu, & impulsu, qui posset a corde, in appe
adhuc sanguis per venas moveretur ad cor, ut vasa suo conatu; & affl
flendat, & hoc per plures perseverat horas, in fine tamen, f cepit solutibus
exponatur sanus non eodem continuato agitur motu, sed ve
avulsis corde & auricula.

Ex his igitur ad prima problemata resolvendi
utitur natura in suis o
veteris, & finibus imm
rens, & quamvis in perfectorum animanti
rens aliquando vas definere, & brare videatur,
cellulas ranarum, & refludinum, illud vas minima alterius prop
dum rete habere, quæ propter exiguitatem suam exq

Ex his etiam summa cum
ne, & anastomosi, etenim si semel
tum fines in rete confundit, proba

[illegible] & [illegible], & [illegible] [illegible] Colubrum, &c. horum illarum venæ, sive fibræ perpetuo deliguant.

[illegible] m hæc omnia fiant, [illegible] [illegible], [illegible] [illegible] [illegible]

Figurarum Explicatio.

Tab. I Fig. I, *Frustum extimum pulmonis exsecti continens dendriticum vetc.*

Fig. II, *Interna vesicæ, & suis situmbrat cum appensa parte ureteris in parte superiore, externa exortus & integra propagatio venæ cavæ, aliqua non pauca.*

Fig. III. *Pulmonum varia adaptatio aspera trachea & pulmonaria vasa quæ etiam a naturali situ distracta exhibentur ad facilorem intelligentiam.*

Tab. II. Fig. I, *Exhibens tantarum pulmones cum appensa trachea.*

A *Larynx, qua semicartilaginea est*

B *Rimula qua vocis sonus emittitur, & aperitur ad animalis libitum, & clausa aere turgentes servat pulmones.*

C *Cordis situs.*

D *Pars exterior pulmonis.*

E *Cellularum propagatum rete.*

F *Arteria pulmonaria propagativa.*

G *Pars concava pulmonis per medium scissi.*

H *Venæ pulmonariæ parietum apices excurrentes propagativæ.*

Fig. II. *Continens Cellulam simplicissimam absque intermediis parietibus aucta in magnitudine.*

A *Cellula area interior,*

B *Parietes divulsi & inclinati.*

C *Arteria pulmonaria truncus cum appensis ramis, quasi reticulato opere desinentibus.*

D *Vena pulmonaria truncus, parietum fissuras peretrans suis decurrentibus ramis.*

E *Vasa in furda & anfractus parietum communia tractibus, & continuatis venis ramificationibus.*

FINIS.

Tab. I.

Fig. 1.

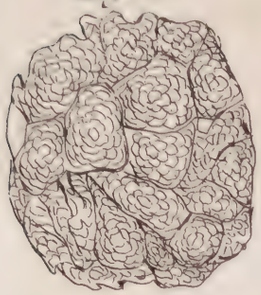
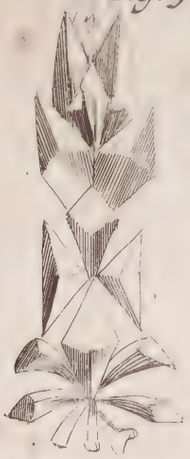


Fig. 2.

Fig. 3.



Tab. II.

Fig. 1.

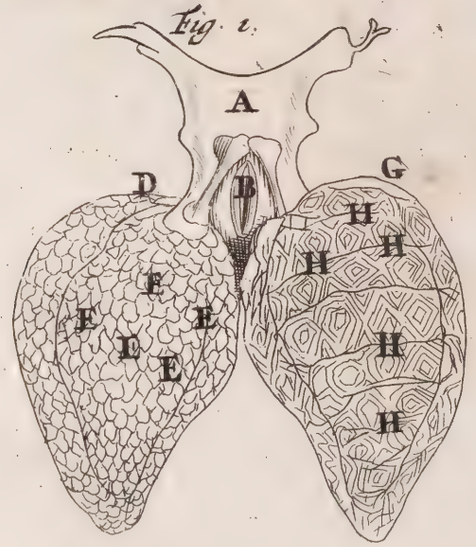
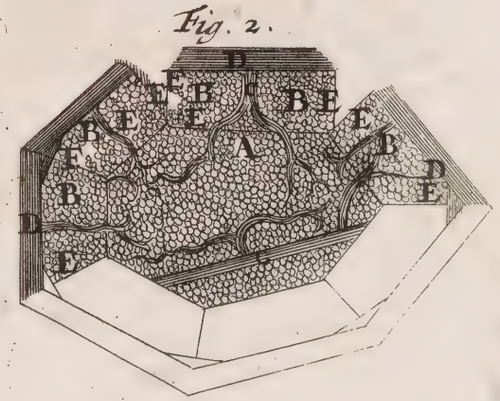


Fig. 2.



THOMAS BARTHOLINUS DE PULMONIBUS.

ILLUSTRISSIMO VIRO

Dn. MAGNO FRIIS

Toparchæ in Faarstrup &c.

Ser. Reg. M Dan. & Norw. &c. Consiliario & Quæstori,

Magno suo & Literatorum Fautori.

S. P. D.

THOMAS BARTHOLINUS.

Datribeni paucarum pagellarum neutiquam eo nomine Nomini Tuo magno consecravi, quasi uno hoc spiritu Magni Tui Parentis, & Soceri Maximi antiquæ in me merita, exhaurire, vel Tuum affectum, quem magnum mihi spondeo, remuneratu ulla parte existimarem, sed ut publicum aliquod monumentum, ex ea arte mutuatum quam non prorsus nulla hactenus fama professus sum, omnesque amant qui se amant aut mortales credunt, Tuque inter reliquas naturæ dotes præter cæteras prudentiam, qua Regum optimo placuisti, æstimare soles, in eadem tamen Tuæ literatis exemplis durissimæ, in gratiam tetricam, in solatium literarum nostrarum, quas Tibi absque simili gentis cæcutibus cordi esse & curæ ad felicitatis desperatæ partem interpretamur, fausta renatarum apprecatione, erigerem & sacrarem. Tu fidelis thesaurorum publicorum custos, de thesauro vitæ nostræ necessario differentem, unoque pene flatu scriptum absolutum, qua soles benevolentiam facilitate excepe, meque tot amplissimis arbelo pectore spiritu vacuos, publico ferè spiritu destitutum, Tibi tamen tuæque gloriæ spirantem, animare pergе & amare.

AMPLIS-

AMPLISSIMO ET CELEBERRIMO

VIRO

Dn. D. THOMÆ BARTHOLINO,

In Regia Hafniensi Academia Professori Honorario, & Fac. Med. Decano,

Tractatum de PULMONIBUS edenti.

Illustras, BARTHOLINE, tuam sic jugiter artem,
Otia nulla Tibi sic sinat esse Labor
A te nunquam abeunt, quod non prodatis? & Orbi
Te magis ut donet, te minus ipse caret.
Ista vigent nostris per Te documenta theatris,
Ut prope sit, quicquid traditur, omne tuum.
Miramur quoties tantum te posse videmus,
Intens exempla Te præeunte sequi.
Seu molles aditus CORDIS scrutator operta,
Vasaque sollicitâ pulsa revulsa manu.
Vel latices aperis, LYMPHÆque liquentia flagna,
Quâve viâ monstra LACTEUS HUMOR eat.
Nec leve calcar habent, qua tu spectacula prabes,
Quitibet juventis addere plura studet.
Hic quoque se PULMO, vestes turgidus, infert,
Jam cunctâ dignus posteritate legi.
Fama etenim, vitamque tuis spirare libellis,
Et decus, & pretium, quod meruere, jubet.
Sunt, fuit qui centum linguas, centum ora precantur;
PULMO tua laudes tot facit ora loqui.

JAC. HENR. PAULLI SIM. F.
Anat. & Chir. Professor
Delegatus.

IH. BAR-

TH. BARTHOLINUS

Lectori S.

DE Pulmonibus nihil jam co[illegible]ram, nisi occasionem de[illegible] Lectores nostri, Vestri amantissimus, ut quam omnia sua [illegible] Musæ effuderunt, tranim[illegible] cubo Scan[illegible] observationibus *Malpighi*, primo novis & curiosis, quas in laudem autoris & nitentes, pro augmento Anatomes [illegible] dit, & commodo studiosorum præsis nostris subjectas rumin[illegible] quam [illegible], visum est cum aut quis conferre, novisque additamentis illustrare, ut [illegible] laboribus autorum & se inter invenis exulcerem, quam in nostris [illegible] expertus sum. Debent res plurimum studiosam ingenii & curiositatis, [illegible] patiar at tantæ gentis gloria apud nos eos tacear. Major studiorum [illegible] de Pulmonibus observationes per *Malpighium* prodiit, florentissimæ [illegible] per Europam *Datum* fuscepit, Florentia cui sima plurimis voluit per *Datum* ejus commentus. Studium susceptum, Florentiæ

TH. BARTHOLINI
DE
PULMONUM
Subſtantia & Motu,
Diatribe.

SECTIO I.

Subſtantiam Pulmonum ex Hippocratis ſententia non eſſe carneam.

Fontana

Audio

[illegible]

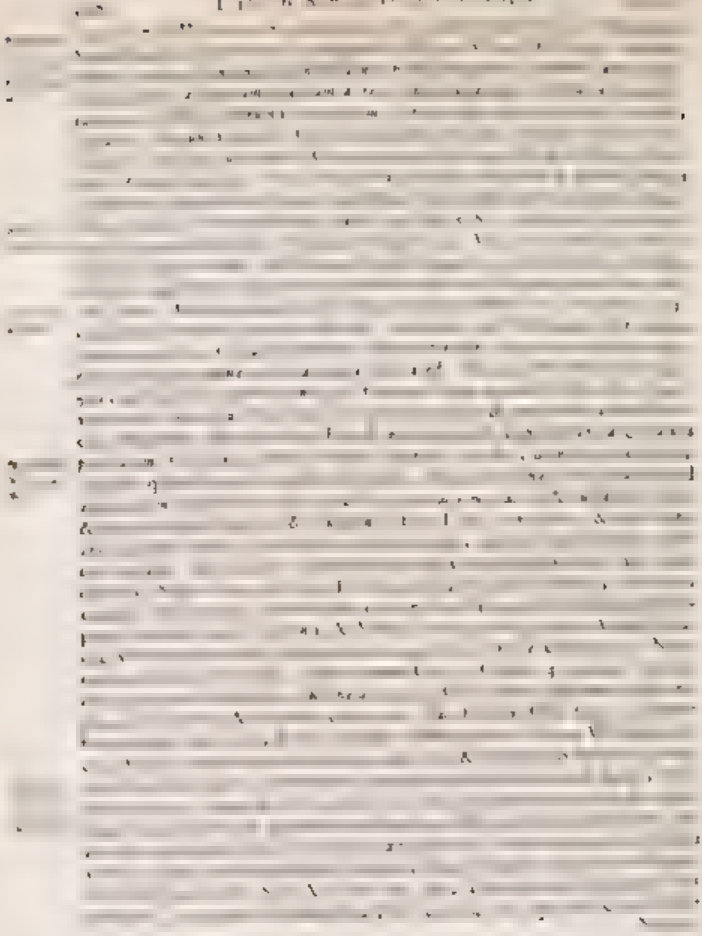
…aliorum occurrendum, qui I…
…ferunt. Inter quos e…

…mmoda ibi tradantur, quæ a comm…
…libram Hippocrati suo vindicat *Zwingerus*, & ab eo jam
…dum *Humanarum* cogitationum & mon…
…simos continet. G…
…*mines*, quædam ad humani… …*Hippocratis* text…
…e ex hoc libro pe… …*Mercurialis* quoque probat…
…rarum allatæ, tanti non sunt, ut propter vadimonium deserere co…
…quidem, Cor…

…pro veris confirmaverunt quæcunque
…tus hic refer… …*Consentiunt* pleraque cum
…*l. de natura pueri*, quem ex Delphico
…*Macrobius* l. … *somn. Scip.* ad testimo-
…) vita hominis pro
…*Martianus*, qui hu…
…lam pro *Hippocrate*

…li sibi dari potu…
…ctarumque omnem con-
…sentaneum, nec tamen
…riosa sequentium in-
…benter accipere, si-
…, eos quibus obi…

…nuncio, quæ struentes turbas prævideo, quibus unam
T
…redire patrocinii datum non sufficit, nisi chylus ex alim…



Nicotianæ fumum denuntere in pulmonem sunt soliti apropter repo

In ovibus pulmonatis, ut eas vocat *Colu*
ras, & in iisdem maculas inde di ar lectio H
tica placuerit, defendi potest. Maculas
lent, cavitatesque
quas fungosus
dicitur ri nio & rarus

nonis natura expressa. An
vero cavernæ hæ eneris, an vesicæ, an vasorum cavitates, nemo determi
re potuit. De n in est, quod *Cous* me de p ns φυσᾶ loquatur,
jus d, esse perforatum, ad

im arteriam, arteriam pul
bus quid sit
clyti suspican

ipse *Plato ουχχ* restrinxit, sed φλεβίας sunt reliqua vasa
seu venarum nomine venieb
passim liquet, &

nus noster in Lexico C
a arteria vas dici posse, sicut existimat *Alb. Kyperus* l. 1.
a, & per eam aliquid ducitur, non inagnopere
qui l. 3. sen. 10, tr. 1. c. 1. ita per *Gerardum Cremonensem* in
Pulmo compositus est; ex pa
dem, creata ex tenuiore sanguine & subtiliore, & etiam nutrimentum ejus. &
est plurium meatuum multi & rari eis. Meatus pl
t, præter c

mollitie & raritate emollit, & quia ad albedinem declinat, non car-
Plato, Dius philosophorum veterum, & princeps in-
etur is in *Timæo* molle primum fuisse pulmonum
trosecus fistulis spongiæ instar distinctum, ut
iorem cordis hujusmodi respiratione & refrigerio tempe-
Carpentarii, mollem confirmat pulmonem & *exsan-*
Landemque ex Plat
ontextus impe
tempus est, ex *Platone* cit, ut frigidum aër cordis calorem temperet
ritu seu aere quam p
etenius, qui hanc opinionem *Hippocrati* attribuit,
Hippocratem autem tan-
cat *Columbus* in Differ de

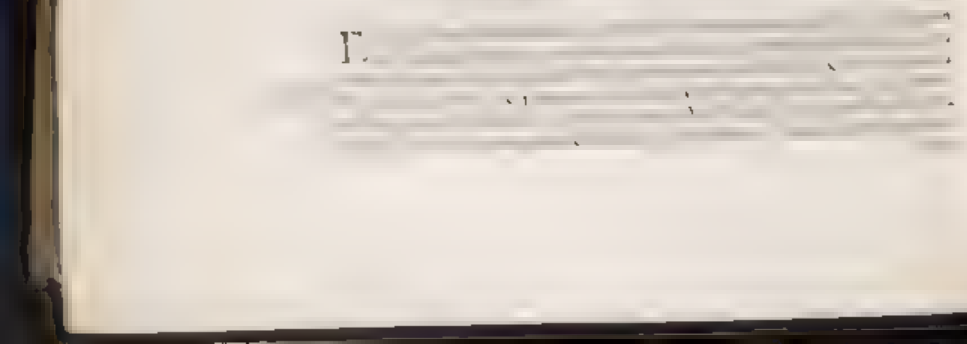
l. 8. de Decret. c. ult. de portion
Quo tenus *Hippocrates*, de Corde, exiguum
in pulmonem *Galenus* l. d. quemque in se id ex
ad quodcunque mal bueritad ean

prehendatur. Quicquid horum sit, time fuo excidet *Plato*, si fan
posit,
sit pul no &
ex Medicorum sententia ta
Cæsius Rie q. Lect. c. 15 Quamvis en d flect ombus ne-
ipsa ejus habitatio
nunc an gentes ex explanatione, & ejus
servari possit quales secund n est, hoc est, exangues, membranosus.
Patet nunc pulmonario-
rum & ipsius habit & c de Pu m. Anat.
sapientibus

notatu

spumosum sanguinem tussi rejectum, ex [illegible] uniformi pulmon[illegible] quem in prælectionibus sequitur *Prosp. Alpinus* [illegible] c. 16. *Hollerius* a[illegible] que [illegible], antiquioribus *Philothæus* Com[illegible] in Aphorism[illegible] male *Hippo*[illegible] pretantur & torquent. Quæ enim [illegible] *Se*[illegible] rat, hi ad carnem pulmonum subi[illegible] alias in pulmon[illegible], spumosi magis propriæ non ca[illegible]ns expectorari posset. Verum id occasum [illegible]oc Aphorismo pro illo capit, qui ab arteria venali a corde [illegible]. Ita accipiendum *Hippocratem*, ex [illegible] exspuitur [illegible] [illegible] [illegible] [illegible] aere magis se in parva copia penetrante, spumosus evadat, etiam [illegible] rupto vase pulmonario sanguinem coloratiorem aliar[illegible] exspui, quia [illegible] [illegible]em & per os & per val- [illegible] [illegible] [illegible] [illegible]

…, sicut creatum est hepar cum comparatione ad cibum. Lic… bum seu corporis humores nutritios. Hinc apud *Plat…*, & coli formæ assimilatur, … sicut *Scaligero* nominatur Exerc. 16. … mones passim deserue… … tem fervidè urget l… Usf. Part. c. 8. quia sine periculo fieri non poterat, ut vas … moms ac spongiosa instar Stoe… ipsius divisione poneret … vocat carnem. Consentit … *author* l. de *Anat. viv.* … nomen appellat carnem teneram & raram, ut rec… … ro autem hæc, cur caro est, si sanguine caret, … quæ ejusdem est *Galeni* confessio l. 7. c. 8. … occupatis, & sine illius affusione spatia, si quæ … rem controversiam emolut Imple… e nm & cal… … ponderc gravior. … lit caro, quàm alio… … Cal… …, ut … nium viscerum dixerit? nec illam aliam particulam … & spirituosam, l. 6. *de Usf. Part.* c 10. Prudentius … nem vocat, nec substantiam, sed χρῶμα, seu rem … f gravit. *Jo. de Vig.* … ta oratione ap… … gurtea, sed firmus … vida est Na…



manes illius, ut obscura explicentur à posteritate, &

nebris lumen attulit *Marcellus Malpig*
i C anissimus, bi
beneficio *Caroli Dati* Viri Illustris Florentini ad nos missas quum ot
u pervolve

ue ingressum & egressum. A. am habeant
dem hujus struct. pulm. Usum esse suspicatur, ut fiat miscela sang

cenositati nostræ fervientem. Inter quas
ia *Cornelii ab Hegelunde* memoriæ recurrit,
a pulmonum consta nussimis petiveris, pulmones habere par
, quæ port n
nullo animadversa fuisse. Mirari desi, quod fig
eteribus observata non sint, quia jam in desue-

oropaiant. In ægrorum verò pulmonibus externæ membranæ

aperiuntur
acarumque
Bronchia

sentat, qu
similes, tet

stylo, tan

tes, & texturâ accuratâ oculos delectant. Diu aërem continent,
nsum tamen obscuriores fiunt & contrahuntur, ut visum am

ura sub terra latent hyeme in antris. Clarius hæc jam patent, q
lit *Pumex*, cui L

sanguine tamen hab . Quod præeunte Malpighio in ranis accurate observavimus,
e oculis *Harv* Ranæ, inqu
state vehementius respirant, aeris plus sol n *vesicules* n
ros similas abio , (unde earum tam ingens rumor) quo eundem postea in c
nat vehicularum locum, qua
, quæ pis ani, ranis autem vesicæ

dore

mares reddunt, ut ciant ad coitum feminas. H
mittæ, etiam omni prorsus aere exhausto, extingui non p
manifesta fit, cur pice liquida ranæ dorso vel capite
Videntur enim mihi viæ spiritus necessariò patentes, oleoso pici
ego aere humido jam modo oblinirí conatuum instrumenta mem
quo humido solent madefacere, ut constantior vox permaneat. V
mido ranæ gaudent, ut beta & brassica apud *Homerum* in Bat
pro vestibus armarunt, ut laxior pulmo in ardenti conflictu respirare
belle distinctum & variegatum. Quam cavitatem ipse rec
extingui refero, esse quasi subtilissimas
in dorsum
si ref
dum non est. Dubia quidem nonnulla primis ho
nt, quæ ad pressius

cet tandem, solis fibris vasisque & membranis re-
lans, manibus vel ba-

onspicuus *Joh. Jacob.*

Wepferus,

erat instar spongiæ madidæ; ingrediebatur
ica, egrediebatur major vena: tunica ad-
nchyma absolvebant fibræ mirè inter se co-
ex mira fibrarii

m illum pentus non f in hoc, sed ante
laborè, detracta tunica eius posse dis Vir idem crud
sia aqua valde con bu splenis v. g bovini, minima ejus portio

n contextum in Epate uterino humano, &
facit amicus veteri amicitiâ mihi colendus.
dunt me auguria, quod eapropter longa ma

suo pede metiri, nec cor-
eparatione vel ratio

manu ingeremur, qui Exerc. 8. Oecon. de R

superesset scrupulus.

Resp. & Curat. Medicin. p. 55. visum, & nobis in *Anatome Reformata* laudatum, de puero [illegible] vulgari pulmone. Totam hujus[illegible] ipso *Fontano* recitabo, qui [illegible]res Viri eruditi quoties scrupulus iis o[illegible] discesserunt, fide mea steterunt. Quatuor annorum puer marasmo ext[illegible] causa à me secatur cadaver, cujus h[illegible] gnum, habebat abscessum prope venam pure circumquaque obductam, lienem boni coloris, & integ[illegible] aut vix conspicuam; Pulmones, mirum dictu, nullos; q[illegible] *membranoso flatu repleta*, venulis exiguis munita, origin[illegible] aspera, quæ refugerium adferre videbatur cordi: Hæc a[illegible] annus XX. Dec. 1638. Ille vero ad responsorias suas [illegible]dicat vesicularem Pulmones in fœtu re
lam membranosam pulmonis loco fuisse, quæ qui[illegible] fu-

exemplo, ex Anatome nostra deprompto, Illustris *Boyleus* [illegible] spir. ut illustrentur ea quæ de Pulmonibus ingeniosè prod

Ego grande obi

Vesicula[illegible]

num substa[illegible]

errarit Natu

tis per fcreatum à tabida

acroama. Facilius jam ex vefic detectis quo loco pulmonum fputa rotunda feu

pro materiali, & fibras pulmonum pro loco concret is agnoscit. Propius tcopum ferit *Jacobus* Comm. in l. 5 C 61 cumque te is P. *Alpinus* l. 7. Præf. Vat. c. 16 formam rotundam contrahi, quod qu

i circumducta. Cæterum ex aspera

lis est sputum ἀφρῶδες apud *Coum*, pipere instar, & velut

vesiculæ à prima conformatione [illegible], eo modo varias figuras acceperunt,

pulmonum testatur idem *cent.* 2. Obs. 29. & alia exempla [illegible] l. 5. c. 4. *Dodonæus* Obs. c. 23. *Christeus* Obs. 38. *Salmuthus* [illegible] l. 1. Obs. p[illegible] Prax adm. [illegible] f. 95 96. *Schenckius*

[illegible]ior dari potuerit excreto calculo, docere vellem. Idem dictum, [illegible] cleo in pulmonibus, de quo *Cent.* 2. *Hist. Anat.* 27 diximus. De ver[illegible] historiam recitat *Alsaravius* c. 1. tr. 13. præt. quos in his c[illegible] præter cannam, loca pu[illegible]onum vacua nominat, & præterea na[illegible] tam cum d[illegible]eo no movebam

[illegible] procuram potuisse. [illegible] singulares vermibus [illegible] alimentando observavi. [illegible]

[illegible] quia membranosa pars, ut etiam spermatica portio [illegible] vesiculis etiam cum [illegible]iculo pus suppuratorum con[illegible] [illegible]s *Erotianus* etiam est [illegible]mo, quod eo[illegible] ex *Hippocrate* l. 1. de Morb. ubi κοιλίαι vocatur locus in pulmone, in qu[illegible] cum sit, & maturescit. Notandum quod ibidem *Coan* incuria

fuit, concedit & naturalem magnitudinem
endo & cuſtodiendo recipit. Itaque ſtructura pulmonis na-
n conſpicitur quando alienos humores, ſeu pus
qui alienam formam ceri hunc ſolent affingere, ſive ea expreſſio per naturæ robur
ſive arte proc tur. Obſervavit *Salmuth* Cent. 1. Obſ. 14. permagnum Can
talitati exemp , in cadavere phthi ici pulmonem dextrum plane con-

bſcuretur. Hinc fibræ laxantur, veſiculæ implentur,

Quantò verò vel origini vici it pu mones, vel ſuccedores, tanto facilius textura artificii plena innotuſcit. Hinc pueris pleuritidis aut peripneumonicis *Hippo-*

3. *de Morbis*, de pleuritide suppurata: *Si per infusum pus minime*

pure in thoracem effuso, indeque spiritum quem

sed plus in recessu

propria & naturalis, in-

Mochico *Hippocrates*, ubi eminentia calcis

ossa in suum locum reponi jubet. *S*

, sive interius.

vel tantil-

servaret, Ἴσον δ' οὐδὲν πνεῖν, non tamen aliter servat aëtem, quam re-

Aristoteles lib. de Respir. 21. εὐαγγεῖα vocat εἶον ἀγγεῖα, hoc est,

utroque pertransit. Nec aerem remoram pos-

attractum, statim ex . Manet pars aliqua in vesiculis, nunquam prorsus vacuis. A

Nam etiam diuturna macerat

obstantibus pulmonis, ut continuo fieri possit porosior & am

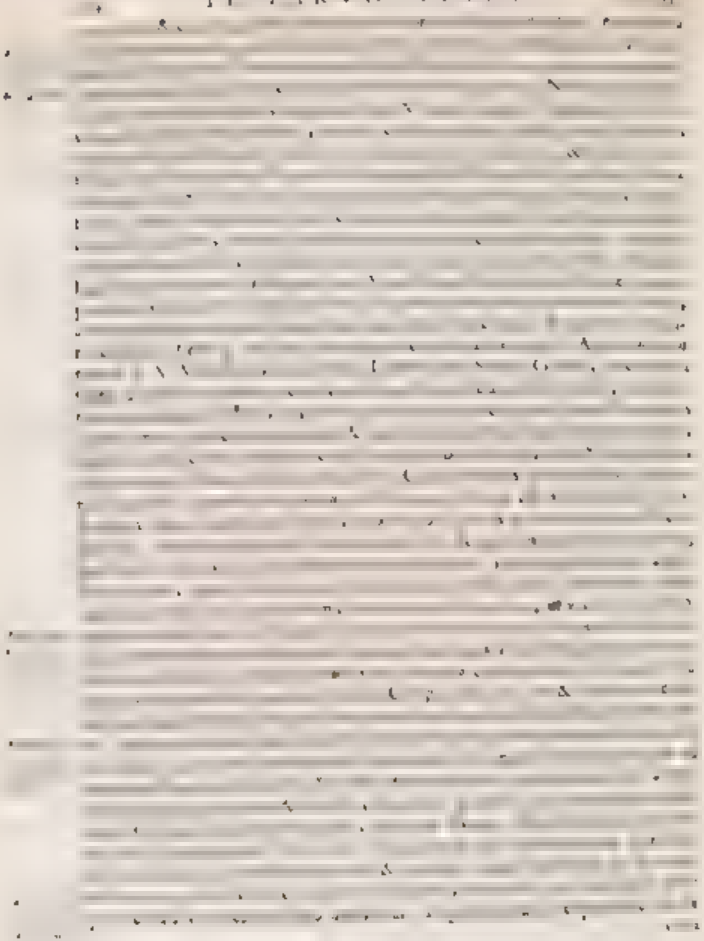
Hanc mo *Highmore* lib. 2. Disq. Anatom. pag. 3. cap. 3. cum expu-

tur aer ob levitatem

rem extrudat, sed

Hanc moram corpori

nutricius, ne espu



dis liber patea[illegible]ſus & extus, non autem ſanguini & cæteris humoribus, niſi impetu & toſſi, hincque diſſecto cadavere nu[illegible]uam alperam arteriam cruentam

[illegible]s ſeu veſic[illegible] *Iterat.*

[illegible]

——— an deceat pu[illegible]tem rumpere ventis,

[illegible]t, ſpiritusque rari ducantur, vel vitio quocunque [illegible]r illis pectus, quod de inſanis *Plautus* in Perſa dixit.

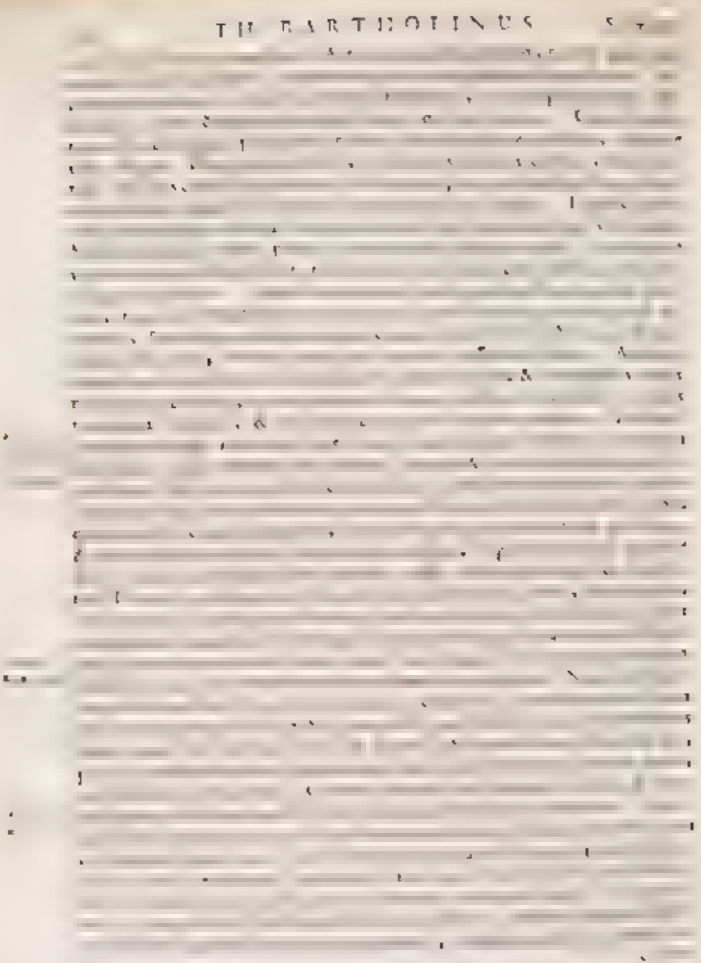
[illegible]s, ut ad ſanitatis ſtatum non reducantur niſi concepti flatus crebriori ſpiritu

ſic *Seneca* Tragicus, *Claudianus* & *Statius* pectora ſua quatiebant, & Indos uſque ad [illegible] *Imperatum* [illegible] Indiatus [illegible] exſtinguat, [illegible] *Rhodium* [illegible] Nam [illegible] Motus [illegible] pulmonum [illegible] qui [illegible] & [illegible] *Ebore Cornu Mento*. Ex quibus tamen [illegible] *Hippocrate* [illegible] Arteriæ, ipſo pectoris [illegible] fecantur.

SECTIO III.

Motus pulmonum contra Helmontium aſſeritur.

Dari [illegible] memores [illegible] motum pulmonum [illegible] quibus aqua [illegible] Nonnulla tamen nobis [illegible] ex [illegible] exortum [illegible] Arduum negotium, & noſtris humeris impar. Facilius quippe inter horologia, quam inter Philoſophos convenit. Reſpiramus omnes, & commoda pulmonis ſentimus, ſed cauſam pauci vel ſentiunt vel ſciunt, adeo [illegible] eſt animæ noſtræ vis opertorum diverſitate impedita, & ſubtilis aeris, quo jugi ſpirationis officium perficitur, [illegible] *Spiritus Corporis* [illegible] Communis [illegible] quæ [illegible] *Lucretius* [illegible] Cur [illegible] *Lucret.* VII. [illegible] *Solinus*, [illegible] Dicam [illegible] *Lucret.* VII. [illegible] Hæc [illegible] opuſculis propugnavi, ita ſe probare videntur, ut quantum [illegible] mearum partium exiſtimavi, argumentum hoc reſumere, & [illegible]



[illegible] ndigeat. Adhæc, quanquam [illegible]
[illegible] mentum [illegible] ater possit, qua atmo[illegible] mo[illegible]
[illegible] mitur author *Ar*[illegible] l. 1. Hist Anim c. 15.
[illegible] Resp de sto Quæ

[illegible] cnant, ut pulmonibus aux[illegible]
[illegible] o loco crebros & mot-
M. A. *Severinus* part 4. *Zootom.* [illegible] diligenter
[illegible] um nect loco hxi videantur [illegible] bere tamen [illegible] mediam
[illegible] bservavit *Harveus* [illegible]

[illegible] ra pulmones q[illegible] [illegible] rem haec [illegible]
[illegible] s apud *Arist*[illegible] [illegible] septa membrana,
[illegible] [illegible] e, suspica[illegible] *aquaprudens.* S[illegible]
[illegible] septa membrana respirare possint aves, e[illegible]
Appen l de Resp. p. 84. nec[illegible] ternam compositam
[illegible] quasdam quasi costulis diaphragmatis qu[illegible] lexibilibus ad sternu[illegible]
Herman[illegible]

[illegible] ei unu[illegible] ex illis, qui de pe[illegible]

[illegible] cerebrum. D[illegible] *tulli* Exerc. 16. ex
[illegible] s omnes pæne egisse, q[illegible] nascentia, quibus
[illegible] , cibus succe
[illegible] arante *Jac.*
Med. Ind. utrum
[illegible] ebat, sed etiam inferus d[illegible]
[illegible] dolore, pla[illegible] , annotat *Dia[illegible]s* Obi

is & constructionis esse incapaces. Duo
re novum intra se aerem non posse recol
r patere, aere repletum, adeoque novi
tis actis incapacem, ut & membranulam. Bre primo
is suis partibus, sed aerem non omnes parte eadem
s substantia ingrediatur venas
huc subjudice lis . Per me cuigant Hermontani, quan
ma parum nobis monum nocebit, & eadem dif-
est. Ad cor
re fluxilem reddat, *Hackius* L. de cord
iem fieri fluidum, nervor Ex eodem
ndit in Quæst. Phy 30.
le sang ni miscetur in plenis vasis,
n venosam supra actum pluribus, &
ad cor decurrent scilinuat. Si sanguinis vel alt
esse hic opus, for s frigiditas su
es sunt bronchia & ipsa pulm Hæc quia spongiosa
vesiculis membranosis conflata, ex nupera *Malpighii*
de fungitur in attrahendo & servando
t, ut vesiculum instar, intrantem & exeuntem aerem
num in his æterna spar & quando expiratione idem
par & succent n ordinaria & æquat respiratio-
actis copiam recipiant. Spongiæ plus aquæ imbibit, quam pro mag
dere, si quidem per omnia se dilatante portiones. Impe
cibus, ex quibus ha-
n fieri in ca
vix potui, unde conjectura
nem uno evacuare
nec fortiu non attrahi pulmonum magnitudinem f ffluvi quoq
utsus quantum potui inspi
m dilucidiorem deprehendi,

tur, quam ad magnitudinem pulmonum
sim fecta pr naxima ins one. In alt
est disparitas. A tu jubet quantum possibile & inspir
eperiatur locus qu
mitudinem. Imm indum nonnihil hunc experimento,
que acquirat aliquam im primo ac exspiratio ips
idicium, si plus minusve exi
ruinque est ratio; nam qua
ntia; tamen aer qui ex piratur multo parcior a
quia vapor exspiratus, docente *Galeno* l. de Us. Resp. c. 5. par copia p
dumptæ. At non raro invenitur hæc spirituum proportio in

que ideo magis ac citius, quo plus inspiravit. Ubicunes

aeris damnum nuper expertus est studiosus Lucas M
in ædibus Viri amicissimi *D. Simeonis Pauli* vitus, Magist
juxta est

cunque elabatur. & antea aliquid aeris in vesica latuit, & si vel vesicam nullam
pletur, at si repetitis inspirationibus implea-
s inde nulla fiet conjectura. Communem

Instrumen-
ta fuffumiga-
dis phthisi-
cis.

pro ficcis effum

e videtur. Quandoquidem enim poros hacce

consensu adeò patentes, ut crebrior & pus in pleuritide hinc expectoretur, credit ac-

Certum

de per

pauco-

...nipus* l. Obl. 25. integram turundam, & *Marchettus* Anat. c. ... *Fernelius* l. 7. Path. c. 8. & *Lemnius* l. 2. Obſ. anna... thoracis injectâ ori communicatum aſſerunt. Quod ..., confirma... injecerat n... ne detergente, abſinthium, a ocu, cent... m, Sed tantus amaror in ejus ore ſurrexit cum nauſea, ut diutius ferre non poſſet. Quam paris remedii porem fortunam ... ius in Noſocomio Pariſienſi obſerva- Pulmonum

... (juſſu vulnerati ſtatim ſentiunt injectorum vim, quod in ...

... A... ros patulos eus, reliquique humores tranſe... dubitare ... utitide pe... monem ferri, inque ipſum venire ex vic... ns concedit, ſed accepta...

... l. 1 c. 14. Has vias mente cognitas in abſceſſibus pectoris ...). Sed nihil periculi erit, ſi manifeſtas pororum vias e...

... is omnis attrahitur, & ſpongia poroſa aquam imbibit: ob-v... ...njectos liquores tam avide lambendo imbi-...

...ſemel inflavi pulmones tam vivorum animalium quam mor...

t d ei polle animal probabiliter. Primo foramina ita tenuiæ patei
s, quæ sursum q
concoctum, vapores, calidos alios l juores ad os ferri per pulmo-
ti aeri obstent, sive membranulæ objectu, valvulæ instar, sive
necdum satis manifesto oculis. Deinde, motu pulmonum
æ, quia vel compressione thoracis in exspirando
ri, & in vivo animali nullam utriusque esse intercapedinem,
zog. c. 12. Pulmo, inquit, utraque pars pectoris supe-
capitibus fistularum suarum. Cortes duplices
itur, quas coopent pulmo fibris suis seu lol
Non officiunt, quia in v des nunt, adeoque per ambages fertur aër, & à
pleura claud nes vulne
thorax & d ient verò, quia motus hoc pacto facilitatur. Documei
t pulmo. Dilatari sile apte non po-
ne in medio a ove , in accensa lignorum
s alacrius ardeat, foraminula p , vel januæ ostiolum aperi
modo lassis cum thorac m motus horum p
non ita
mal moveri potes
n est & oculorum
raptum esse inhitantiæ porositate, & levita-
in contrarium adata *Helmontii* paradoxa, quæ no hacten

responsione est dignatus, ponderis habere, ut eapropter [illegible] certo immoto-
lis figatur, velut Terminus Deus.

SECTIO IV.

Motus causam non esse Cor, sed thoracem seu diaphragma.

Actus, seu ea interna hic seu externa. Inter internas causas est pro
quia organis ad motum proprius destinatur, & pro arbitrio
el accelleratur, ut taceam, motum cessare, si cesset thoracis &
Hinc nullam actionem pulmonibus assignavit *Galenus* l. 7
[illegible]
am perpetuo constringere, & versa vic
fibras & nervos. Ibi voluntas simplis est equus, qui ha
s sunt nervi, quemadmo
d quas demum actiones
it, ut tas totas, sicut
pum R
nibatur, & permissimo su , qui motam primus ut o-
et. Ibi omnium actio proprie , ipsum excipias, qui ca
te confectus erat, si & trahentibus eo
Manud. ad Med. p. 1. c. 1. §. 2 §. 5
rotæ motu proprio, sed
tur & promove
lav, sed non causa, quæ ab extra ven
simus vel dubuda dilc

alterum facile erit

trahatur. *Averrhois* tent

eam refel it Vir magnæ famæ

ex corde, aer ex vicinia thoracis, & externæ thoracis partes.

rios motus per ceſſationes d nt, vel ejuſdem utilitatis gratiâ ſuſcipitur. Fatetur idem l. d. communem eſſe ad pulſuum rationem, quoad motum in-

a naturali, ſicut feces alvi, lotium, ſemen excernendum, voluntas

Fanellius in Alp. Cæſ. defendit, licet ea quæ reſp onem urgeat tantopere neceſ- ſo poſt ex-

tractionem. Obvertit *Duus* c. 3. quod ubi mutuo respondent cel
tantum primas & patentes in pulmone vias habeat, reipi
esse contractionem, si vehemens & copiosus, ut sanguis etiam ad
diversis fiant, & revera diversæ inter se sex voces.
Argutus alius inverteret Per que motus cordis ad naturam pulmonum ex
& ext Jeorius experimentum affert *Malpighius*, quod in animalibus adhuc viventibus fo thorace, si jam collapsi pulmones, iterum immissa fistula aere inflentur, rest ur motus cordis jam pene ext nctus irrumpente sanguine & tacta aeris compi ine. Non tamen igitur utriusque motus causam eandem credo, quanquam ad
henduntur. Nonnunquam enim decem plureſve in me nus, ut pluribus motibus sufficiat. Fateor in cavernulis pulmonis
ipſa non inelegantes repræsentat idem *Duus* per musicum illud
loc rer digeris modo adductis, modo reductis ad tibiæ foramina modulatur, non tamen tam velociter, aut tam crebro utrem insu, sed ubi aere deficient
concidit. Sed dispar est ratio, nec per omnia quæ similia, quia tam pulmonibus cavitas non est, nec in aere expiratio major, sed accessiva
bram angulam, adnexe, tibiam modulatur musicus pro arbitrio, quod in cordis
comparat , quia pulmo impletur, quia dilatatur, uter
impletur. Alio experimento pro corde *Cæsal*

dis & motum

ſpiritum poterit exſpirare, q
Sed an non reſiquiæ ſunt aeri in
in reſpiratio moderatâ ? Ex corde verò aliquem aërem ſeu vapo-
m eſt, an v idem ad reſpirationem naturalem ſufficiat,
no ſolam exſ p
us, præcipuæ partis, quam
pat in Cæſ. Alp. contra Cæſ.
abſone ad experimen-
ventum juvare, quia vehe-
ndantur, nullam intra ſe attrahent aërem ex-
onibus ſuo tumore, tantum etiam re-
diſtendere, quo ferrarius faber ſoles;
corpus ſolidum calore a, ſed pacatiori men-
s cum *Ariſtotele* cujuſq s cum *Cæſal-*
ſſimo, qu. l. 5, *Qu*
at plerumque quam pulſum, nec ſimul hæc dilatari aut contrahi
penetravit, at l. d. & l. 2 *Quæſt. Med.* 17. c
lo per pulmones in ſiniſtrum, exinde
per vaſo-
per nebu
rum anaſtom
ſam ſatis manifi
Sed quoniqu
Pulmones *Galeni* patro
ſua mo- Nam ſanguinem in pul-
iret, quia pulmones
s. 5
n remoi
s ſeu bi

chia comprimunt, & aërem libere commeantem [illegible] In maxima sanguinis ebullitione, quæ ad pulmones fit in vari[illegible]tibus, ac pulsus magnitudinem decrescit respiratio. In peripneumonia, ubi febris acuta, difficilis respiratio trahitur, quando pulsus magnus observatur & celer. Fatetur ipse *Aristoteles* de Resp[illegible] Disputat in [illegible]

macra sunt, p[illegible] guinis ac humoris contr[illegible] Adhæ[illegible]m à corde ejusque ebullitione, nemo facilè in ca-

[illegible], Simile quid ex solidis fabricis affert *Ari-*

[illegible] & in pluribus cor laxo intervallo distat à pulmone, *Ari-* Cor in multis longe distat à pulmone
[illegible] l. c. 6. in quibus nec ad tumorem cordis, nec mo-

[illegible], ab aliquo externo movente, quod cum manu artificis æquiparat facit. Pulmones autem proxime ambit & contegit thorax, cui an-

Primum est, perire motum pulmonum, si thorax penetrante vulnere ita [illegible] per cussus, ut aer confertim ingrediatur, subsidereque [illegible]ces. Id [illegible]

[illegible]

is hoc ſæculo inſtiguatur, aeri ingreſſus
lueris, præterea illæſi pulmones
ficium obturant. Chirurgi quo-

cludere, multis lineis
uratur, patellam calentem apponen-
a, muſculus ille thoracis primarius,
x, thoracem concidere, & eo concidente re-
to, in *Anatome* nobis uſitato, luce clarius pa-

Demo
ponere ſolent cyathum aqua
ri diaphragma, & admotum

lius examen vocare Vir eruditi nobiſque
ne illo robore neutiquam ſe tueri poſſunt, ut ſcrupuloſis reſiſtat
tho ventriculo impoſito narrantur, quem etiam à muſculis ab
immoveri poſſe nemo diffitebitur. Alias pro diaphragmate ra
Append. Reſp. p. 83. à *Charletono* Exerc. 8. repeti

em thorace, ipſumque eſſe [illegible] ineipem authorem [illegible]. Clarius ex
[illegible], *Galeno* hac parte co[illegible]

pro efficiente causâ eſt habend
[illegible]. In anatome canum v[illegible]
vulſo, pulmones tamen obſerva[illegible]

thorax pro reſpiratione effici[illegible], ſed motus quidam mordi[illegible]

ad id qu[illegible] evacuatur attractus, ſicuti in fiſtulis quæ in aquam mitt[illegible]

[illegible]ius attrahitur, ut cavitates impleat, vel con[illegible]
[illegible]iere ſponte ſequitur. Hoc conſequentiam vocat il[illegible]
aërem moveatur, vel attrahatur, ne vacuo loces ſit
[illegible]s vulneribus ejus neceſſitatem illuſtrat, quando immo-
bilis manet pulmo, ap[illegible]e enim evidenter ab extra aërem ad vacua thoracis
trahi propter levit[illegible]

SECTIO V.

A

S

philosopl

resurget major fatel

nio ad experimenta pertexenda longiorem vitam præ-

is infestus concessisset, ut quæ mente conceperat

ta, nec ulla

Ejusdem fama

Professores, sed indignantur,

automatum &c. redegerit, si-

vivo progressa dicitur, & vo-

columbæ, quæ libramentis lu

nâ & auratâ occultâ vo-

rum *Cartesii* Hominem studio & opera Amplissimi *Florentii Schuyl*

in *Schirm* edicum, imaginatum creauit magno ingenio ex

igo. Ad motum pulmonum accingor, cujus ide

positam existimavit forte, nudamqu

mentis Præceptoris defendenda, non pauca docto

eamus signata, nostris placuerunt, & ab ipsis

Ruminavi per intervalla *Cartesii* rat nam deprehendi, at

rebi haud d ffic

dum, qui

Hinc perpetuus vene

ne exemplo machinarum, sicq

in respiratione, ad necessarias conditi

sorbere prohibetu possimus, nec flare, sed ad quidem pul-

flatusque fiat, non attractione ab Divinus *Plato* in Timæo pri-

reformatione concessit, sec Nam ex

explicat *Veslingius* cap. 8

ternum sibi proximum aerem, & trahit secum d

sit vacuum, aer externus se nobis per quosl

e vicissim vel expelitur è corpore, vel quon

n respirando recipit, & reul

habere v[illegible] incipu. *Galeno* vero l. 8. de Decret. c. 8. ideò improbatur hæc ro-
ta Platonica [illegible] voluntas excluditur, cum tamen citius & tardius, pius & mi[illegible]
[illegible] etum inspirare in nostra potestate situm sit. A[illegible]

[illegible] liquores per tu[illegible]

[illegible] nt. Contrahunt & hi labia, & pectus immobile videtur,

[illegible] & quanquam sede suâ pelleretur, quæ causa dirigens est,
[illegible] si fulam repetat? cur non aliud spatium petit, præsertim

[illegible] is subintret non contemnendo pulmonum damno. In cu-
hi trahunt [illegible] is potenter attrahunt, carnem, sanguinem,
hæc &c, sive [illegible] sive buxeæ quas probat *Severinus* in Chir. Be-

…idem poros & canales, magis notum, sed non memorabor.

…vhot… …qua aqua per spongiæ latitans, …

…Cartesio fertur aerem pelere, non trahere.

…

…

…

…pere. At si per thoracem motus … Aeris aeri

…ris non est, & aër …

…ri comperitur, qua thorax extror- …

…sequatur, superno … er, vel in … simpere fluor

… Non posse nos

…, quod nec pla-

…ar, ne dicam loco pelatur. In

[illegible] accommodus non penetrat, sicut in pneuma-
[illegible] conicum undique thoracem concludit rimis obturatis
[illegible] caput tamen exsertum respirationi vacat, aereque alum-
[illegible] anhelamus, licet cuticula bene munitum sit reliquum corpus.

[illegible] mones irrumpat, quoniam sibi minorem quam si
[illegible] spiram seu di[illegible] per[illegible] Aër quem
[illegible] corpori fulcitus sustinet, sor[illegible]ris cujuscunque auxilio, qui à thorace
ratio tamen cursum suum fer[illegible]ntibus, aëre vicino fortiter per contra-
commotus non fuit. Idem eve[illegible]rium ventum discussio. Præterea, [illegible]nuant vestes tuas, quibus corpus amictum, quæ-
cunque apud *Lucret.* l. 4.

——— suo de corpore odorem
[illegible] acrem, panore[illegible]

[illegible] nostro patet, perun-
[illegible]. Hinc ex
[illegible] r. Senten-
[illegible] canes so-
[illegible] pit

te intronuflo, [illegible] malignus in antro concluſus, [illegible]
[illegible] ſalubris eſt, nu[illegible]a aura

controverſiæ finem imponam, [illegible]
one thoracis pelatur loco aer, qua cond[illegible]
edigi, non ſecus ac culcitra plumea, præſert[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

in *Bartoletto* [illegible] c. de D. & Reſp. rotundis cumpis exca[illegible] &

[illegible]

[illegible]

[illegible]

[illegible]

t compressio, quam aer facile
im, five vacuo
, In quam rem Hero,
neumaticis, ita interpretè Commin
tamen ex omni parte, seu interject
im vacua, sicut arena, quæ est in lectionibus. Itaque animo
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FINIS.

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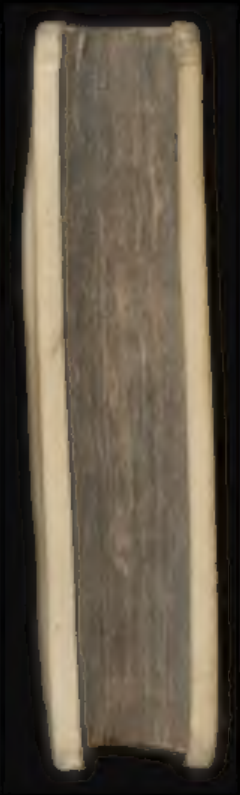

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